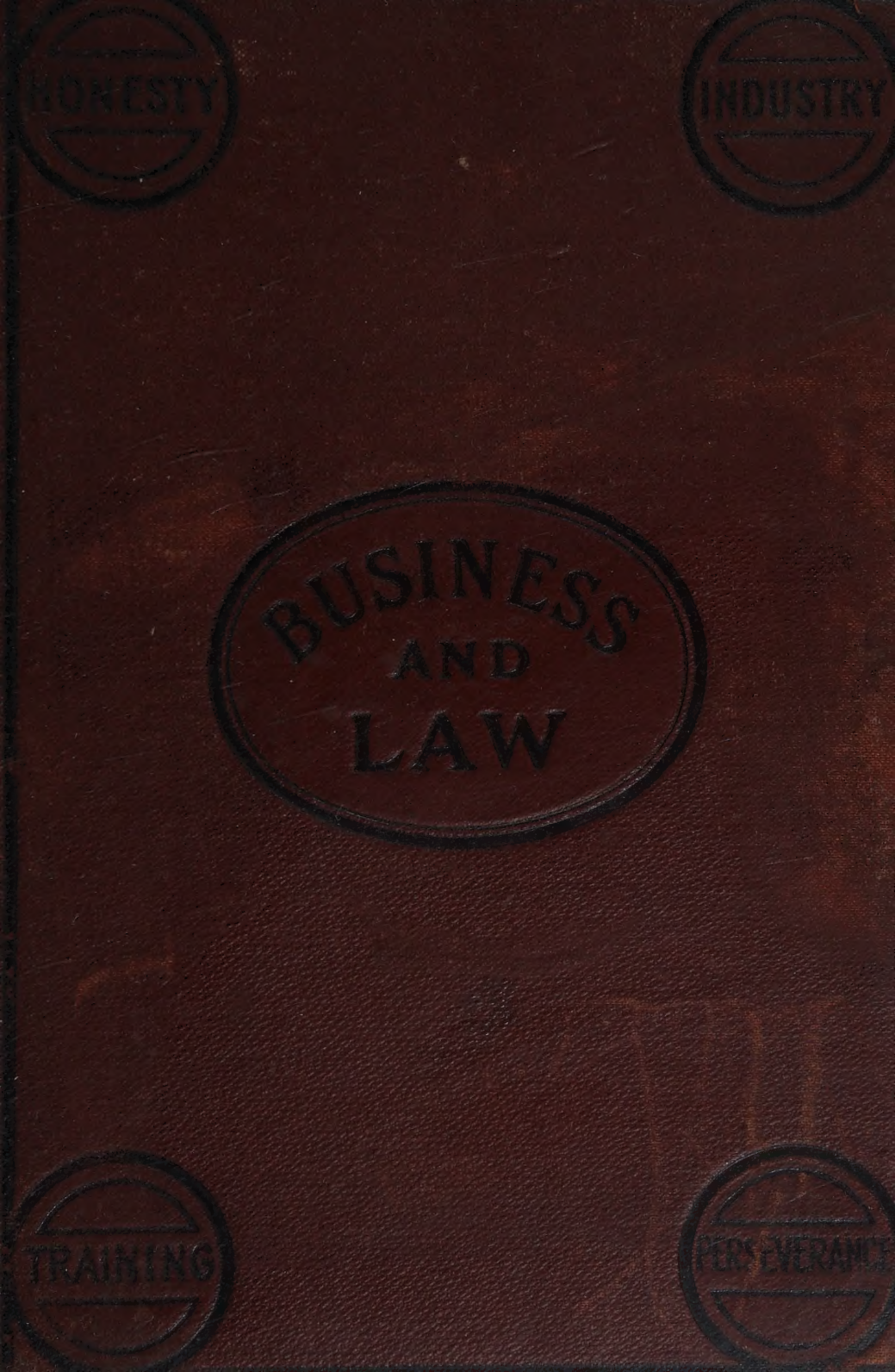
HONESTY
INDUSTRY
BUSINESS
AND
LAW
TRAINING
PERSEVERANCE

BUSINESS AND LAW

Certificates from Prominent Attorneys

FROM NORWICH, CONN.

I have examined and corrected the book entitled "Business and Law" so far as it pertains to the laws of this state, and I hereby certify that in my belief it will be a valuable aid to persons transacting business under the laws of Connecticut.

FRANK T. BROWN.

FROM MANCHESTER, N. H.

We have examined the work entitled "Business and Law" and corrected the points of law pertaining to New Hampshire. We hereby certify that in our opinion it states correctly the law of New Hampshire with reference to the subjects therein treated.

BURNHAM, BROWN, JONES & WARREN.

FROM PHILADELPHIA.

This is to certify that I have examined and corrected the work entitled "Business and Law," and I hereby certify that in my opinion it states correctly the law of Pennsylvania in reference to the subjects therein treated. E. AUGUST MILLER.

FROM THE OFFICE OF DEPUTY CLERK OF U. S. DISTRICT COURT, DISTRICT OF VERMONT, AT BRATTLEBORO.

This is to certify that I have examined and corrected the book entitled "Business and Law" by E. T. Roe and Elihu G. Loomis, Attorney at Law at Boston, and that in my opininon the statements of law therein contained are in accordance with the laws of the State of Vermont. ERNEST W. GIBSON.

FROM PORTLAND, MAINE.

I have examined and corrected the work entitled "Business and Law," and I certify that in my opinion it states correctly the laws of Maine in reference to the subjects therein treated when so examined by me. CHAS. J. NICHOLS.

FROM NEW YORK CITY.

I have examined and corrected the work entitled "Business and Law," and I certify that in my opinion it states correctly the law of New York in reference to the subjects therein treated.

JAMES H. HICKEY.

FROM BOSTON.

I have examined the work entitled "Business and Law," and I certify that in my opinion it states correctly the law of Maine, New Hampshire, Vermont, Rhode Island, Connecticut, New York and Pennsylvania in reference to the subjects therein treated.

CHAS. R. DARLING.

NOTICE: The above certificates are from practicing attorneys who were expressly employed to examine and correct the manuscript and proof of this work so far as it pertains to their respective states; and hereby certify as to the correctness of same. PUBLISHERS.

BUSINESS AND LAW

OR

THE CAREFUL MAN'S GUIDE

A COMPLETE LEGAL AND BUSINESS COMPENDIUM

INCLUDING FACTS, FIGURES, TABLES, WEIGHTS, MEASURES, STATISTICS, SHORT CUTS IN FIGURES, ETC.

TO WHICH IS ADDED

PRACTICAL HOME BUILDING AND THE BUSY MAN'S ATLAS

BY

E. T. ROE, LL. B.

MEMBER OF NEW YORK BAR, FOR TWENTY YEARS U. S. DISTRICT ATTORNEY, AUTHOR CRIMINAL PROCEDURE IN U. S. COURTS, AND ONE OF THE EDITORIAL STAFF ENCYCLOPEDIA AMERICANA, ETC.

AND

ELIHU G. LOOMIS

ATTORNEY-AT-LAW, BOSTON

ASSISTED BY PRACTICING ATTORNEYS IN EIGHT STATES

BOSTON CHICAGO

THE JOHN A. HERTEL CO.

CENSUS EDITION

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PREFACE

This volume is intended as a safe and trustworthy guide to the proper transaction of all kinds of business.

It supplies the necessary legal and business information, together with the appropriate forms, for the successful conduct of practical business of every description.

The matter it contains has not been gathered at random, or from out-of-date publications, but has been carefully written and prepared by eight practicing attorneys, and many successful business men, experienced in the particular kinds of business of which they respectively treat.

Its collection of commercial and legal forms is so complete as to enable any person to readily draw up almost any kind of business document that may be required in any state of the Union, including Contracts, Deeds, Leases, Mortgages, Bonds, Bills of Sale, Bills of Lading, Building Agreements, Articles of Partnership, Promissory Notes, Orders, Due Bills, Receipts, Powers of Attorney, Guarantees, Wills, etc.

The innumerable points of practical law and valuable business helps and hints it contains are not scattered haphazardly through the work, but are all arranged systematically, under appropriate headings, with index commencement words printed in boldfaced type, so that the eye of the reader catches the particular information wanted immediately.

Besides its legal and practical information, the work contains: 1. Letter-writing, with helpful forms and illustrative examples of social, business, and official correspondence. 2. Exhaustive explanations of the various swindling schemes

of the day, thoroughly exposing the dangerous confidence games and frauds by which honest farmers, bankers, merchants, and business men generally are daily defrauded out of their hard-earned money. 3. The latest census tables, interest, limitation, and exemption laws of all the states, and a large amount of statistical information that cannot be found in any other publication. 4. Tables for rapid computation and ready information, constructed so simply that they can be easily understood and practically used by every one having the slightest knowledge of figures. 5. A miscellaneous collection of useful information pertaining to all the business and social relations of life. 6. Practical home-building, with complete plans, designs and estimated cost. 7. The busy man's Handy Atlas.

It makes no pretensions to full and exhaustive treatment of the subject matter comprised under the different heads, for to do this would require under each head a library and for each state a separate treatise; but like first aid to the injured on the battle field it is intended to anticipate and supplement the work of the skilled specialist, by giving such information as may avoid many errors into which in the course of business undertakings a man is likely to fall.

As the statute law may be and often is different in each state from every other state, pains have been taken to go over this work with care and point out such differences as may exist in the different states by careful statement of the law under each jurisdiction, or by such words of caution as will indicate that the law varies in some states from the statement of the text.

It is believed that this book will be found of great practical assistance in the conduct of the affairs of those who use and study it.

May 1, 1906. THE AUTHORS.

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PART I

Education, Advice, Business Maxims, etc.

1856 **WM. R. HARPER, D. D., LL. D.** 1906

A Prince of Scholars and Educators

Late President University of Chicago

COMMERCE

"COMMERCE is King," remarked Thomas Carlyle, and if the aphorism was true in his day, how much more truthful and pertinent is it at the present time! To it England owes her wealth, power, dominion and influence, and by means of it America bids fair to outstrip all history in the achievement of commercial success and importance.

The close and steadfast pressing of our material interests during the past twenty years; the wonderful inventive genius of our people, so richly productive in labor and time-saving devices and processes of manufacture, and their aggressive, inquisitive and enterprising spirit have combined to place this nation in the front ranks, if not in the lead, of the great civilized powers of the world. The political expansion of the United States is only a visible and symbolical representation of its growth in commerce, manufacture, art, education and general progress. With our varied climates extending now from the tropics to the frozen north, our vast seaboard, expansive lakes, broad, rolling rivers, exhaustless mineral and agricultural wealth, no argument is necessary to establish beyond peradventure the manifest destiny of this nation.

BUSINESS

Business, in every age of the world, has been the chief pioneer in the march of man's civilization. Blessings everywhere follow its advancing footsteps. It travels over no bloodstained fields to secure its noble ends, but everywhere brings man into friendly and harmonious intercourse. It removes local prejudices, breaks down personal antipathies, and binds the whole family of man together by strong ties of association and of mutual and dependent interests. It brings men together, and towns and cities are built; it makes man venture upon the seas in ships, and traverse continents on iron pathways, and wherever we go, whether abroad or at home, it is business that controls the great interests of the world, and makes the affairs of men mighty.

SUCCESS

It is a matter of time and work; I shall get it yet. All I need to do is to keep on trying. —*Marconi.*

One cannot do successfully what he does not perfectly understand. He may have competent employés or trusted attorneys to do his business, but they may do his work imperfectly, or seek their own ease or profit at his expense, and he, not being able to detect their malpractices, must suffer the loss or perhaps fail. Or he may attempt to manage everything himself, commit fatal errors, as he will be almost sure to do, and thereby sustain a still greater loss. "First understand every detail of your business, and then go ahead."

A wealthy farmer said, when asked how he made his money, "Sir, *I understand my business* and attend to it." In that reply is the sum and substance of all true success.

One of the first students of public economy in France in the nineteenth century said that all the difference between a liberal and successful enterprise, and one that was tyrannical and unpromising, lay between the two phrases in the mouth of the master:

"Go to work," and "Come to work."

He said that in farming, at any rate, "Go to work" meant ultimate failure, and "Come to work," with ordinary luck, led securely to fortune.

EDUCATION

There is no element which will enter into our future success more vitally, have greater influence and bearing on our national prosperity, or prove a more obvious safeguard against evils which may naturally arise from a continued flush of success, than perfect and judicious popular education. The more carefully you prepare business men—with whom, in a great measure, the future of the country rests—for the occupations they are to pursue, the more you enlarge their views, moderate their desires, rectify their aims and insure their success.

Stay at school another year or two, and don't be ashamed of what ought to be your glory, that you want to learn more. Step from the district school to the high school, from the high school to the college, if you can. Get a business education by all means—you will never learn too much. If you desire to become a mechanic instead of an engineer or a farmer, an education will not unfit you to become either. It will always be capital bearing a large income of interest.

"When home and lands are gone and spent,
Then learning is most excellent."

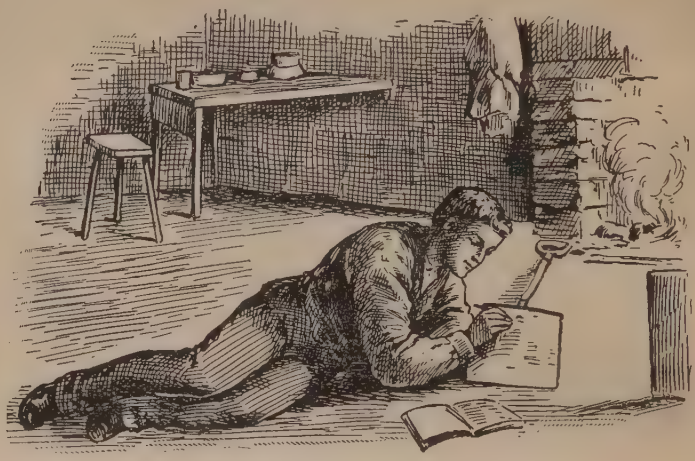
GET INTO THE RIGHT PLACE

How many poor physicians who would have made masterly mechanics; how many wretched merchants, who would have made noble, athletic farmers; how many pettifogging parchment-minded lawyers, who might have done the community some service as cobblers. No wonder the old philosopher said, "God has made in this world two kinds of holes: round holes and three-cornered holes; and also two kinds of people: round people and three-cornered people, but almost all the round people are in the three-cornered holes and the three-cornered people in the round holes.." Hence the uneasiness and unhappiness of society and the failure of so many enterprises. Get into the right place, stay there and master your situation, and success is yours. There never was a business in which all failed. There is always room at the top.

WHAT TO DO

Young men, you are the architects of your own fortunes. Rely upon your own strength of body and soul. Take for your star, self-reliance. Don't take too much advice—keep at your

helm and steer your own ship, and remember that the great art of commanding is to take a fair share of the work. Think well of yourself. Strike out. Assume your own position. Put potatoes in a cart over a rough road, and the small ones go to the bottom. Rise above the envious and jealous. Fire above the mark you intend to hit. Energy, invincible determination, with a right motive, are the levers that move the world. Be in earnest. Be self-reliant. Be generous. Be civil. Read the papers. Advertise your business. Make money, and do good with it. Love your God and fellowmen. Love truth and virtue. Love your country and obey its laws.



TRAINING FOR GREATNESS

The man who dares to think for himself and act independently does a service to his race.

INDUSTRY AND INTEGRITY

"There is nothing possible to man which industry and integrity will not accomplish. The poor boy of yesterday—so poor that a shilling was a miracle in his vision; houseless and breadless; compelled to wander on foot from village to village, with his bundle on his back, in order to procure labor and the means of subsistence—has become the talented young man of to-day by

the power of his good right arm, and the potent influence of his pure principles, firmly and perpetually maintained. When poverty, and what the world calls disgrace stared him in the face, he shuddered not, but pressed onward. Wealth! what cares he for that, as long as his heart is pure and his walk upright? He knows, and his country knows, and his country tells, that the little finger of an honest and upright young man is worth more than the whole body of an effeminate and dishonest rich man. These are the men who make the country—who bring to it whatever of iron sinew and unfailing spirit it possesses or desires.

"Instead of saying that man is the creature of circumstances, it would be nearer the mark to say that man is the architect of circumstances. It is character which builds an existence out of circumstances. From the same materials one man builds palaces, another hovels; one warehouses, another villas. Bricks and mortar are bricks and mortar until the architect can make them something else. Thus it is that in the same family, in the same circumstances, one man rears a stately edifice, while his brother, vacillating and incompetent, lives forever amid ruins. The block of granite, which was an obstacle on the pathway of the weak, becomes a stepping-stone on the pathway of the strong."

MORAL COURAGE

Have the courage to discharge a debt while you have the money in your pocket.

Have the courage to do without that which you do not need, however much you may admire it.

Have the courage to speak your mind when you should do so, and hold your tongue when it is better you should be silent.

Have the courage to speak to a poor friend in a threadbare coat, even in the street and when a rich one is nigh. The effort is less than many take it to be, and the act is worthy of a king.

Have the courage to set down every penny you spend, and add it up weekly.

Have the courage to admit that you have been in the wrong, and you will remove the fact from the mind of others, putting a desirable impression in the place of an unfavorable one.

Have the courage to face a difficulty. Difficulties, like thieves, often disappear at a glance.

Have the courage to tell a man why you will not lend him

your money; he will respect you more than if you tell him you can't.

Have the courage to cut the most agreeable acquaintance you possess, when he convinces you he lacks principle. "A friend should bear with a friend's infirmities"—not his vices.

Have the courage to wear your old garments till you can afford to pay for new ones.

Have the courage to pass the bottle without filling your glass, and to laugh at those who urge you to the contrary.

JOSEPH W. FOLK.

Have the courage to review your own conduct; to condemn it where you detect faults; to amend it to the best of your ability; to make good resolves for your future guidance, and to keep them.

FRANKLIN'S MAXIMS

1. Temperance.—Eat not to dullness; drink not to elevation.

2. Silence.—Speak not but what may benefit others or yourself; avoid trifling conversation.

3. Order.—Let all things have their places; let each part of your business have its time.

4. Resolution.—Resolve to perform what you ought; perform without fail what you resolve.

5. Frugality.—Make no expense but to do good to others or yourself; that is, waste nothing.

6. Industry.—Lose no time; be always employed at something useful; cut off all unnecessary actions.

7. Sincerity.—Use no hurtful deceit; think innocently and justly; and if you speak, speak accordingly.

8. Justice.—Wrong none by doing injuries, or omitting the benefits that are your duty.

9. Moderation.—Avoid extremes; forbear resenting injuries as much as you think they deserve.

10. Cleanliness.—Tolerate no uncleanliness in body, clothes, or habitation.

11. Tranquillity.—Be not disturbed at trifles, or at accidents, common or unavoidable.

HABITS OF A BUSINESS MAN

A sacred regard to the principles of justice ought to form the basis of every commercial transaction, and regulate the conduct of the upright man of business.

He is strict in keeping his engagements.

He does nothing carelessly or in a hurry.

He employs no person to do for him what he can do for himself.

He keeps everything in its proper place, and does everything at its proper time.

He leaves nothing undone that ought to be done, and which circumstances permit him to do.

He keeps his designs and business from the knowledge of others.

He is prompt, decisive, civil, and obliging to his customers.

He does not overtrade his capital.

He prefers cash to credit, but, if credit is necessary, as short a time as possible.

He prefers small profits and certain returns to large profits and uncertain settlements.

He is clear and explicit in making a bargain.

He leaves nothing of consequence to memory which he can commit to writing.

He will not be above his business.

He keeps copies of all important letters written by him, and carefully preserves all which he receives.

He is methodical in his habits and arrangements.

He is always at the head of his business.

He holds it as an axiom, that he whose credit is doubted should not be trusted.

He constantly examines his books, and sees that they are properly kept.

He makes a balance of the true state of his affairs at regular intervals.

He avoids law suits and accommodation bills.

He is economical in his expenditure, and lives within his income.

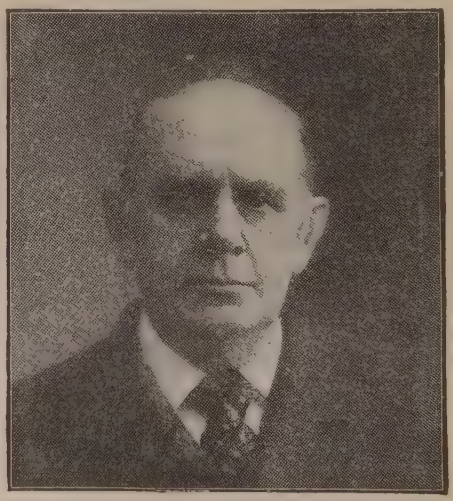
He is cautious in becoming security for any person.

He is generous, but not until he has been just.

Let a man of business conform strictly to these habits; when once formed they are easily retained, and success will result from their practice.

Let him take pleasure in his business, and it will become a recreation to him.

Let him hope for the best, be prepared for the worst, and bear resolutely whatever happens.



MARK HANNA

DILIGENCE IN BUSINESS

Cultivate a spirit of diligence, both in your temporal and spiritual employ. Strictly adhere to your business; religion

commands this. There may be difficulties in your calling, and so there are in every situation; but let not this relax your exertions, lest you give occasion for the enemy to speak ill of you. Idleness has led to a thousand evil consequences; while, in itself, it is a most unhappy state of mind to labor under. It is good to be employed. Action is really the life, business, and rest of the soul. "Idleness," as South says, "offers up the soul as a blank to the Devil, for him to write what he will upon it."

CAREFULNESS IN MONEY MATTERS.

Punctuality in money matters is one of the greatest sources of comfort and prosperity to the man in business; indeed, to every man. Punctuality in payment may be said to double our means. The man of disorderly habits, with no proper account of income and expenditure, and no just estimate of the relative proportion of his means and obligations, is perpetually exposed to the annoyance and vexation of having demands made upon him, not so much beyond his means as disproportioned to the chance provisions of the moment.

A sensible employe will make his employer's interests his own; and to that end he will endeavor to acquire a thorough knowledge of the details of the business, and do all in his power to honorably advance the interests of the house; for by so doing he will make himself in a great measure indispensable to his employer, which, of course, will undoubtedly have a beneficent effect on his own welfare.

Time is money; therefore devote every moment of it to the attainment of some definite object; and this must be done, if at all, in a methodical manner. If there is any information in this or any other book which you wish to acquire, do not simply read, but study it. Vigor of body begets vigor of mind; therefore take care of your body and keep good hours, and remember that one hour's sleep before midnight is better than two afterwards.

Marshall Field.

The late Marshall Field is generally regarded to have been the foremost business man of his time. Beginning his business career in Chicago as a clerk in 1856, he forged rapidly

ahead until he died, January 16, 1906. In 1905 his retail establishment is said to have done a business amounting to $53,000,000, and his wholesale house a business of $70,000,000, making a total for both houses of $123,000,000. This magnificent mercantile success was achieved by Mr. Field on the principles of business integrity and fair dealings, an achievement which constitutes for him a more enduring monument than the great Field Museum, for the founding of which he bequeathed the munificent sum of $8,000,000.

In the conduct of his business Mr. Field was unalterably insistent that the following rules be observed:

Business Rules of Marshall Field.

Never give a note.
Never buy a share of stock on margin.
Never borrow.
Never heavily mortgage real or personal property.
Work always on a cash basis.
Buy for cash and sell on short time.
Never misrepresent in any degree the quality of merchandise.
Hold customers to strict enforcement of their contracts.

Big Fortunes.

The ten richest men in the United States:

John D. Rockefeller	$1,000,000,000
Andrew Carnegie	300,000,000
Marshall Field (died Jan'y 16, 1906)	150,000,000
W. K. Vanderbilt	120,000,000
John Jacob Astor	100,000,000
J. P. Morgan	100,000,000
Russell Sage (died July 22, 1906)	60,000,000
J. J. Hill	60,000,000
William A. Clark	60,000,000
William Rockefeller	50,000,000
Total	$2,000,000,000

The five thousand biggest fortunes in the United States on January 1, 1906, according to an estimate made by Mr. Cleveland Moffett and approved by the statistical expert of R. G. Dun & Co., were distributed as follows:

Number of Fortunes.	Amount.
10 aggregating	$ 2,000,000,000
490 aggregating	3,000,000,000
4,500 aggregating	10,000,000,000
Total, 5,000 aggregating	$15,000,000,000

A HARD WORD.

Perseverance! Can you spell it?
And its meaning, can you tell it?
If you stick to what you're doing,
Study, work, or play pursuing,
Every failure bravely meeting,
Bravely each attempt repeating,
Trying twice, and thrice and four times,
Yes, a hundred, even more times,
You can spell it! You can spell it!
And its meaning, you can tell it!

IMPORTANCE OF LITTLE THINGS.

The Duke of Wellington was a first-rate man of business; and it is not perhaps saying too much to aver that it was in no small degree because of his possession of a business faculty amounting to genius that the Duke never lost a battle. His magnificent business qualities were everywhere felt; and there can be no doubt that, by the care with which he provided for every contingency, and the personal attention which he gave to every detail, he laid the foundations of his great success.

Michael Angelo was one day explaining to a visitor at his studio what he had been doing at a statue since his previous visit. "I have retouched this part—polished that—softened this feature—brought out that muscle—given some expression to this lip, and more energy to that limb." "But these are trifles," remarked the visitor. "It may be so," replied the sculptor, "but recollect that trifles make perfection, and perfection is no trifle."

Attention to details makes a business man, or any other kind of man, "sure that he is right," and then, of course, it only remains for him to "go ahead."

"An estate is a pond; trade is a spring."

"There is no royal road to riches, and, in a business as big as mine, no back lane."

"How much value I place on industry, and how I believe in hard work at the thing once for all accepted as a man's

'calling' in life, may be seen from the fact that even at this stage of my career I generally work from nine in the morning to ten at night."

"My receipt for prosperity, in such a concern as mine, is at the disposal of all. Here it is: 'Work hard, deal honestly, be enterprising, exercise careful judgment, advertise freely but judiciously."

"Never despair; keep pushing on,' was my motto during all that time of struggle." —*Sir Thomas Lipton.*

MARKS USED IN WRITING AND PRINTING

PUNCTUATION

Punctuation is the use of marks in writing or printing, for indicating the grammatical divisions of sentences.

Some idea of the importance of knowing how to properly punctuate may be gathered from the following:

A Two Million Dollar Comma

It seems that some years ago, when the United States, by Congress, was making a tariff bill, one of the sections enumerated what articles should be admitted free of duty. Among the articles specified were "all foreign fruit plants," etc., meaning plants imported for transplanting, propagation or experiment.

The enrolling clerk, in copying the bill, inserted a comma, accidentally, making it read, "All foreign fruit, plants," etc. As a result of this simple mistake, for a year, or until Congress could remedy the blunder, all the oranges, lemons, bananas, grapes and other foreign fruits were admitted free of duty. This little mistake, which any one would be liable to make, yet could have avoided by carefulness, cost the government not less than $2,000,000. A pretty costly comma, that.

1. **The Comma** (,) denotes a slight pause and divides a sentence into its component parts. It must be used in sentences which would otherwise be misunderstood.

2. **The Colon** (:) is placed between the chief divisions of a sentence when these are but slightly connected and they are them-

selves divided by some other marks, and is also placed between clauses when the connection is so slight that any one of them might be a distinct sentence.

3. **The Semi-colon** (;) indicates a longer pause than the colon and also divides compound sentences. When a clause especially explains the meaning of some other expression, it is separated from that expression by a semi-colon, and one is used to divide a sentence into sections when the parts are not independent of each other, enough to require a colon.

4. **The Period** (.) denotes the close of a sentence. It is placed after every declarative or imperative sentence.

All abbreviations and initial letters standing alone are followed by a period; used also to separate whole numbers from decimals and after the enumeration of letters or figures.

5. **The Interrogation Point** (?) is used after every sentence or part of a sentence containing a question.

6. **The Exclamation Point** (!) is used to denote wonder, surprise, or astonishment.

7. **The Dash** (—) indicates a sudden change in the subject. One is usually placed before the answer to a question when they both belong to the same line. Often used instead of the parenthesis marks.

8. **Quotation Marks** (" ") indicate the words of an author or speaker quoted. Every quoted passage should be enclosed in quotation marks. Quotations consisting of more than one paragraph have the first quotation mark at the beginning of each paragraph, but the second is used only at the close of the last paragraph.

When one quotation includes another, the latter is enclosed by only one of each of the first and last marks, (' ').

9. **The Parenthesis** ( ) is used to enclose an explanatory remark, which might be omitted without injuring the grammatical construction of the sentence.

10. **The Hyphen** (-) is used to connect the syllables or parts of a compound word, and to connect a word broken at the end of a line, when the remainder follows on the next line.

11. **The Caret** ($\wedge$) denotes that some word or letter has been omitted by mistake; as,

I am $\underset{\text{going}}{\wedge}$ to New York.

12. **Brackets** [ ] are used chiefly to give an explanation, or to

supply an omission; as, Yours [the United States] is a great country.

13. **The Apostrophe** (') placed between letters and above them in a word denotes a contraction; also used before or after the letter *s* to denote the possessive case; as, O'er, John's book, James' house.

14. **The Stars** (***) or N. B. are used to invite special attention.

15. **The Brace** { connects several words with one common form.

16. **The Paragraph** (¶) begins a new subject.

17. **The Section** (§) is used to subdivide chapters.

18. **The Asterisk** (*), **Parallels** (‖), **Dagger** (†), **Double Dagger** (‡) are used as reference marks.

19. **The Commercial A** (@) used in market quotations, means "at" or 'to."

20. **The Sign** "℔" means per, and "℔" means pound.

21. **The Ellipsis** (* * *) or (———) denotes the omission of letters or words.

22. **The Index** (☞) points to something of special importance.

23. **Underscore** (———) is a line or lines drawn under words in writing that is intended for printing. One line denotes italics; two lines, small capitals, and three lines, large capitals.

SPELLING

Very few rules for spelling can be given to which exceptions are not so numerous as to render the rule of little value, but the following are a few of the more general:

Words ending in *e* drop that letter before the termination *able*, as in move, movable; unless ending in *ce* or *ge*, when it is retained, as in change, changeable, etc.

Words of one syllable, ending in a consonant, with a single vowel before it, double that consonant in derivatives; as ship, shipping, etc. But if ending in a consonant with a double vowel before it, they do not double the consonant in derivatives, as troop, trooper, etc.

Words of more than one syllable, ending in a consonant preceded by a single vowel, and accented on the last syllable, double that consonant in derivatives, as commit, committed, but except chagrin, chagrined.

All words of one syllable ending in *l*, with a single vowel before it, have *ll* at the close, as mill, sell.

All words of one syllable ending in *l*, with a double vowel before it, have only one *l* at the close, as mail, sail.

The words foretell, distill, instill and fulfill, retain the double *l* of their primitives. Derivatives of dull, skill, will, and full, also retain the *ll* when the accent falls on these words, as dullness, skillful, willful, fullness.

Words of more than one syllable ending in *l* have only one *l* at the close, as delightful, faithful, unless the accent falls on the last syllable, as in befall, etc.

Words ending in *l*, double that letter in the termination *ly*.

Participles ending in *ing*, from verbs ending in *e*, lose the final *e*, as have, having; make, making, etc.; but verbs ending in *ee* retain both, as see, seeing. The word dye, to color, however, must retain the *e* befor *ing*.

Words ending in *oe* retain the final *e*, as shoe, shoeing; hoe, hoeing.

All verbs ending in *ly*, and nouns ending in *ment*, retain the *e* final of the primitives, as brave, bravely; refine, refinement; except words ending in *dge*, as acknowledge, acknowledgment.

Nouns ending in *y*, preceded by a vowel, form their plural by adding *s*, as money, moneys; but if *y* is preceded by a consonant, it is changed to *ies* in the plural, as bounty, bounties.

Compound words whose primitives end in *y*, change the *y* into *i*, as beauty, beautiful.

RULES FOR THE USE OF CAPITALS

A very common fault is the improper use or omission of capital letters. Persons liable to make such mistakes should study attentively the rules given below on the subject and then carefully apply them.

Most words commence with small letters. Capitals must be used only when required by the following rules:

The first word of every sentence and the first word of every line of poetry should begin with a capital letter.

All proper names should begin with capital letters.

Words derived from proper names begin with a capital.

Every word that denotes the Deity should begin with a capital.

Pronouns relating to the Deity should generally commence with a capital.

The months of the year and the days of the week begin with capitals.

The words north, south, east, west, and their compounds and abbreviations, as North-West, commence with capitals when they denote a section of country.

The pronoun I, and the interjection O, are always capitals.

Every direct quotation should begin with a capital letter.

All titles of persons begin with capitals.

All the principal words in the titles of books should begin with capital letters.

The several chapters or other divisions of any book begin with capitals.

Common nouns personified begin with capital letters.

Any word particularly important may begin with a capital letter.

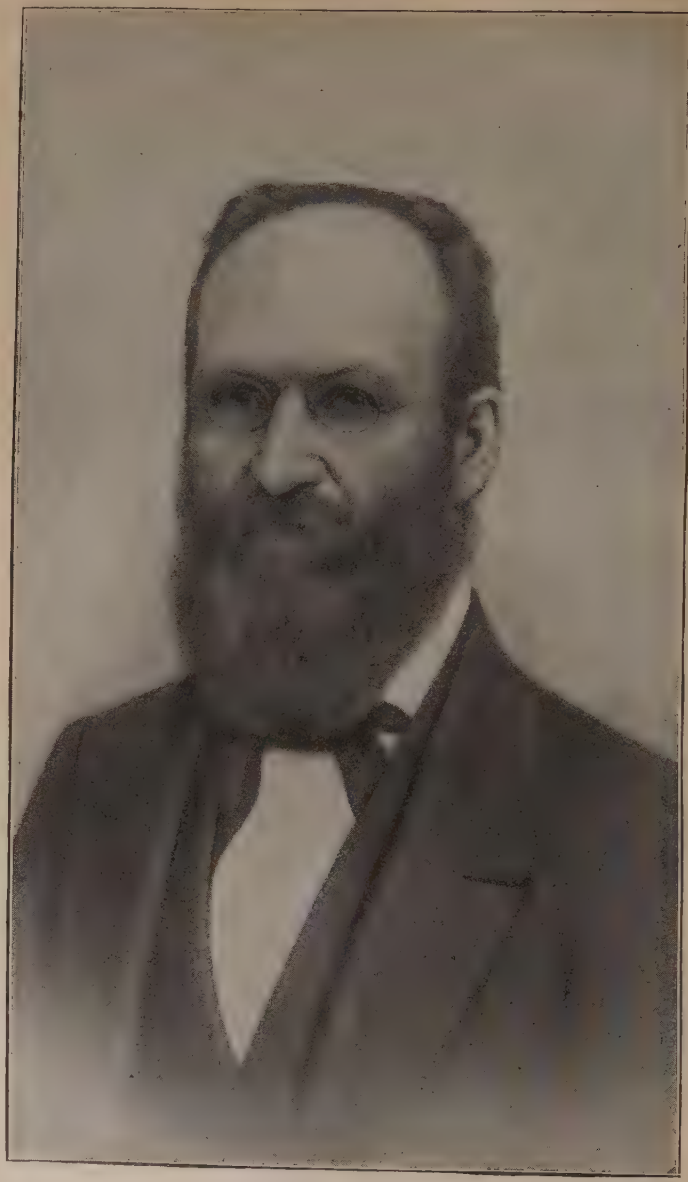
All words denoting religious denominations begin with capital letters.

In all kinds of advertisements nearly all the leading words usually begin with capitals.

In accounts each article mentioned should begin with a capital.

PART II

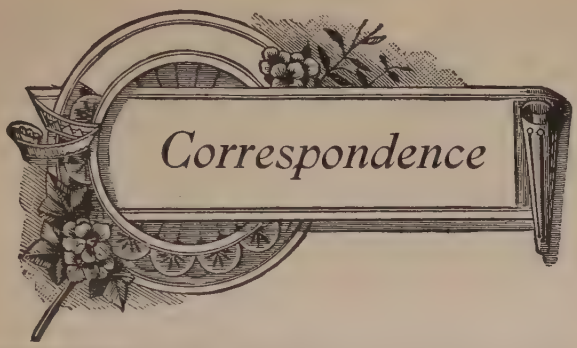
Correspondence, Letter Writing, Social Forms, etc.



1800 **PLATT ROGERS SPENCER** 1864

Penman Poet Educator

Author of the Spencerian Style of Penmanship



Correspondence is the interchange of thought by means of letters.

A large per cent of the world's business is transacted by correspondence, and in these days of rapid transit and cheap transportation friends and relatives become widely scattered and their only means of keeping in touch with one another is through letter writing.

To be able to write a good letter is therefore not only an accomplishment but an important necessity.

It is the opinion of competent judges that a man's habits and qualities as a business man may be fairly estimated from familiarity with his business letters, and his social correspondence is likewise an index to the trend of his thought, and his general character. It is safe to say that the majority do not appreciate the value of the ability to write a good letter.

First in Importance.—Perhaps the matter of first importance in a letter is the expression of the proper ideas in the proper language.

Next to That an easy, graceful style of writing, with words correctly spelled, and sentences properly punctuated. Improper punctuation often renders the meaning unintelligible or the opposite of what was intended altogether.

Classes of Letters.—Letters are usually divided into two general classes: *Social and Business.*

Social Letters are those that grow out of social and personal relations: as, *letters of affection, friendship, congratulation, sympathy, introduction, condolence, etc.*

Business Letters, as the term implies, are such as are written regarding matters of business of whatever kind.

BUSINESS CORRESPONDENCE

The Materials.—Good pen, ink and paper. For business correspondence three styles of paper are in general use, viz.: *commercial note*, about 5x8 inches; *packet note*, about $5\frac{1}{2}$x$8\frac{3}{4}$ inches, and *letter paper*, which is usually about $8\frac{1}{2}$ x 11 to 13 inches. The smaller sizes for short letters and the larger for long ones.

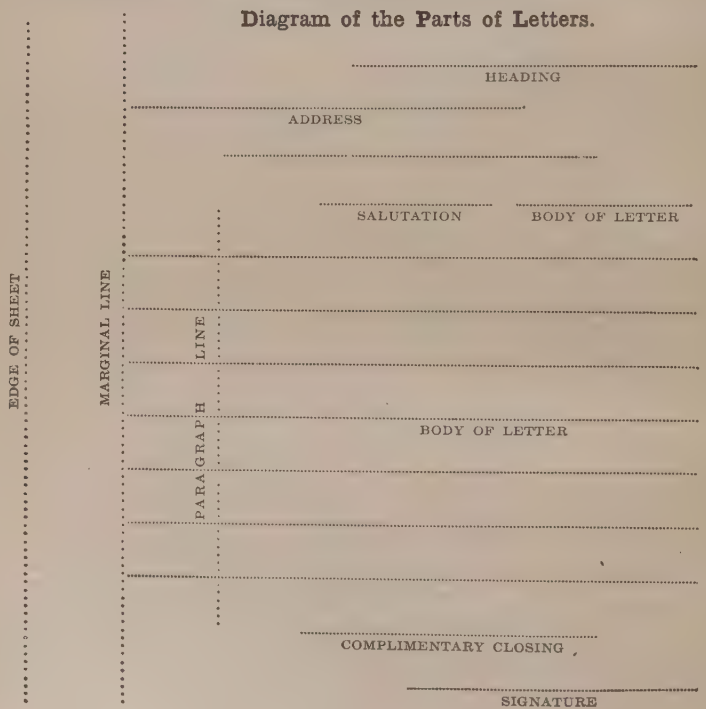
The envelopes most commonly used are Nos. 6 and $6\frac{1}{2}$.

Parts of a Letter.—For convenience in explaining the form of a letter we call the different parts by the following names:

1. Heading (Place and Date).
2. Address.
3. Salutation.
4. Body of Letter.
5. Complimentary Closing.
6. The Writer's Signature.

The following diagram will show clearly their position:

Diagram of the Parts of Letters.



Heading.—The heading indicates where and when the letter was written and should contain information the person written to will need in directing his reply. It should be written to the right hand side of the sheet and about two or two and one-half inches from the top. There is no objection to using two or more lines for the heading if required.

The Address of a letter consists of the name and title of the person or firm to whom you are writing, the residence, or place of business, as the case may be, to which the letter is to be sent.

The inside address, as this may be called, will be the same as the address on the envelope, excepting that on the inside address the city and state may be written on the same line. Begin the address on the left-hand side of the sheet, one inch from the edge of the paper, and on the line following the one on which the heading is written. The second line of the address should begin an inch farther to the right than where the first line is begun.

The Proper Use of Titles.—Two titles of courtesy should not be joined to the same name: as, *Mr. John Hartley, Esq.;* nor should a title of courtesy be used with a professional or official title: as, *Mr. J. B. Wilson, M.D.*, or *Hon. Henry Weston, Esq.* One exception to this rule, however, is permitted where a clergyman's initials or first name is not known, to write, *Rev. Mr.* (——), giving only the surname.

The Salutation is the complimentary term used to begin the letter. The forms most in use are *Sir; Dear Sir* or *My Dear Sir.* In addressing a firm, *Sirs, Dear Sirs, Gentlemen*, or *My Dear Sirs.* If the person addressed be a lady, *Madam*, or *Dear Madam.* If she be a young, unmarried lady, *Dear Miss*, or it is quite correct to omit the salutation where doubt exists as to whether she be married or not, or if the writer has no acquaintance with her.

Follow the salutation with a comma and dash, and never write *Gents* for *Gentlemen*, or *Dr* for *Dear*, etc.

The Position of the Salutation depends somewhat upon the number of lines in the address. The examples on next page will illustrate this and the form of letters in general.

The Body of the Letter is that part which contains the message or information to be imparted. In this, good form, penmanship, spacing and paragraphing should receive due care.

The body of a business letter should begin on the same line, following the salutation.

Trenton, N. J. April 24, ——

Mr. James Farnham,
Birmingham, Ala.
Dear Sir,- I take pleasure in

364 Forest Avenue,
Dayton, O. Nov. 24, ——

Sargent & Greenleaf.
100 Court St.
Rochester, N.Y.
Gentlemen,- We send you with this

The Complimentary Closing follows the body of the letter, on the line below the last line of the letter, and consists of the words of respect or regard used to express the writer's feelings toward the person written to. They are in a sense conventional and are often used without thought as to their meaning. The most common forms in business use are: "*Respectfully,*" "*Respectfully yours,*" "*Yours very respectfully,*" "*Yours truly,*" "*Yours very truly,*" "*Yours faithfully,*" "*Sincerely yours,*" etc. "*Gratefully yours*" may be used if the writer is under obligation to the one written to, or "*Fraternally yours*" if a member of the same order or society.

In official letters a more formal style is used: as, "*I have the honor to be, Yours very respectfully.*"

The complimentary closing should always be consistent with the salutation. For example: to begin a letter with a formal "*Sir*" and close with "*Sincerely yours*" would show very bad taste.

Yours truly,
Henry Joiner & Co.

Respectfully,
O. K. Dunton

Yours respectfully,
Foster, Manning & Co.

I am,
Yours very respectfully,

The Signature is the name of the writer or the firm or company he represents. It should be written under the complimentary closing and should end just at the right-hand edge of the sheet.

It should be written very plainly. Many writers have a habit of making their signature the most unintelligible part of their letters, presuming that because their name is familiar to themselves it is to everybody else.

A lady writing to persons with whom she is not acquainted should always prefix the title, *Miss* or *Mrs.*, in parenthesis, to her signature.

Folding.—The letter sheet should be folded so as to nearly fill the envelope. To fold a sheet of letter paper to fit the No. 6 or 6½ envelope, turn the bottom of the sheet up to the top, making one fold, then fold equally from the right and from the left, making the letter, when folded, a little narrower than the envelope. If the envelope is held with the left hand, back up, and the letter inserted as folded, all the receiver has to do when he opens the envelope is to withdraw the letter and turn back the folds, and he has it before him right side up. This is important.

Sealing.—Be particular to seal your letter properly, especially if it contains money or other enclosure.

A letter of introduction or recommendation should never be sealed when entrusted to bearer.

The Envelope Address.—The name and title should be written on the center of the envelope lengthwise. When street and number are given, or the direction "*In care of Mr.* ——" they follow on the second line, the city or town on the third, and the state on the fourth or lower right-hand corner of envelope.

The envelope should be placed before the writer with the flap farthest from him, otherwise it will be addressed upside down; and the letter should not be inserted until after the address is written.

More than five million letters and packages reach the dead letter office at Washington every year because they are improperly directed, therefore great care should be exercised in addressing envelopes.

See examples of addressed envelopes.

The envelope used for business purposes should have either written or printed upon its upper left-hand corner the name and address of the sender, with the request to be returned in a certain number of days if not called for.

ADDRESSED ENVELOPES

If not called for in 10 days return to
HERTEL, JENKINS & CO.
PUBLISHERS,
CHICAGO, ILL.

STAMP

William Hart, Esq.,
398 Grove Ave,
Detroit,
Mich.

Messrs. Barton & Willis,
Truesdale,
Lincoln Co.,
Col.

STAMP

The Morning Herald,
Bennington,
Box 493. Ala.

Opening Letters.—Letters are properly opened by inserting a knife or other convenient instrument under the flap at the end and cutting across the top of the envelope.

SOME SPECIAL POINTS IN BUSINESS LETTERS.

1. Be brief and to the point without being blunt or offensive.
2. Be courteous in your requests and polite in your demands.
3. Never write a letter with a lead pencil; always use pen and ink.
4. Avoid the use of flourishes.
5. Blots and errors due to slovenliness are inexcusable.
6. Avoid interlining; rather rewrite your letter.
7. Aim to write as legibly as you know how.
8. Never discuss or refer to matters of a social nature in a business letter.
9. Never write a letter when angry or vexed.
10. Write on one side of the sheet only.
11. When requesting information always enclose stamp for reply.
12. If your letter contains money or an enclosure always state the amount, or what the enclosure is.
13. Take a copy of all letters containing matters of importance. It may save you trouble.
14. Be prompt in acknowledging the receipt of a business letter, mentioning its date.
15. Never write an anonymous letter; it is the coward's weapon.
16. See that your letters are divided into paragraphs and properly punctuated.
17. Write as though your correspondent was at your side and you were talking to him.
18. Letters ordering goods should state plainly the articles wanted, giving full directions for shipping, and the name and address of the person ordering.
19. Money should be remitted by draft, P.O. order, express order or registered letter.
20. Money orders or other enclosures should be folded in the letter; not put in the envelope separately.
21. Do not use figures in the body of a letter, except to denote sums of money, dates, street or P.O. box numbers.
22. Do not forget to sign your name.

23. &c means *"and so on in the same manner."* Etc. is entirely different and means *"and other things."* Use them only in their correct sense.

24. In requesting payment of money due you, avoid being offensive. Remember, *it is better to have a person a friend, than an enemy.*

25. Do not mix up an order for goods in the body of a letter. Either use a separate sheet, or make it a separate part of your letter with only one style or kind of goods on a line.

26. Use care and neatness in addressing your envelope, and if writing a number of letters be sure that John Smith's letter does not go in Tom Brown's envelope.

27. Never write a dun, or any matter of importance, on a postal card. To make a threat of any kind on a postal card renders it unmailable, and to use indecent language thereon is a criminal offense, under the laws of the United States.

28 A prompt acknowledgment of the receipt of an order for goods is a commendable practice.

29. Avoid abbreviations and the use of postscripts.

30. Never write a threatening letter; in most of the States it is made a criminal offense by statute.

RULES FOR WRITING A POSTAL.

1. A card should be dated either on the upper right-hand corner, or on the lower left-hand corner.

2. Always sign your name in full.

3. If you wish an answer, give your full postoffice address, unless it is well known by the person to whom you are writing.

4. Never write a demand or a request for money on a postal card. It is disrespectful to the person receiving it.

5. Never write an invitation on a postal. Society prescribes polite forms for this purpose

6. Do not trust important matters to a postal card, for it is open to inspection, and the law does not provide for its return to the writer if it fails to reach its destination.

EXAMPLES OF BUSINESS LETTERS

Letter Containing a Remittance

Canton, Ohio, Feb. 10, 1904.

Messrs. Williamson & Caton
Williamsport, Pa.

Gentlemen:—Enclosed please find N. Y. Draft for Sixty-five Dollars ($65.00), in settlement of your invoice of January 12th, which you will kindly receipt and return. Yours truly,

Peter Schrader.

Letter Acknowledging Above

Williamsport, Pa., Feb. 12, 1904.

Mr. Peter Schrader,
Canton, Ohio.

Dear Sir:—Yours of the 10th inst., containing N. Y. Draft for Sixty-five Dollars ($65.00), came to hand this morning.

We enclose bill properly receipted, and wish to thank you for prompt settlement of your account. Yours respectfully,

Williamson & Caton.

Letter Ordering Goods

120 Penn St., Scranton, Pa., May 1, 1904.

Messrs. Geo. M. Hill & Co.,
110 W. Jackson Blvd.,
Chicago. Ill.

Gentlemen:—Please ship by freight over the Penn. Line the following books:

50 Copies Handy Encyclopedia, Cloth Binding
10 Copies Handy Encyclopedia, Half-Morocco Binding
27 Copies The Business Educator, Cloth Binding
13 Copies The Business Educator, Morocco Binding
10 Copies Bible Symbols, Cloth Binding

Enclosed you will find P. O. money order for Fifty-Seven Dollars ($57.00) in payment of above. Kindly ship as promptly as possible, and oblige,

Yours for success,

Edwin Lewis, Agent.

Calling Attention to Error in Invoice

Hamilton, Ohio, Jan. 27, 1904.

Messrs. Davis & Holt,
Cincinnati, Ohio.

Gentlemen:—I find in checking your invoice dated the 10th inst. for shipment of biscuits that you have overcharged me 15 cents per box on the plain sodas. I herewith return said invoice and ask you to kindly send me a corrected one.

Respectfully,

Jas. Doyle.

Letter Acknowledging Order for Goods

110 W. Jackson Blvd., Chicago, Ill., May 3, 1904.

Mr. Edwin Lewis,
Scranton, Pa.

Dear Sir:—Your letter of the 1st inst., containing Fifty-seven Dollars ($57.00) and order for books, has been received.

We are shipping your books via Penn. freight as ordered, and trust they will reach you without any unnecessary delay. Bill of lading will be mailed you to-morrow.

Thanking you for the above order, and wishing you the best of success, we are,

Yours very truly,
Geo. M. Hill & Co.

Letter Inclosing Corrected Invoice

Cincinnati, Ohio, Jan. 30, 1904.

Mr. Jas. Doyle,
Hamilton, Ohio.

Dear Sir:—Your favor of the 27th inst. is at hand, and in reply, we desire to apologize for our error, and herewith enclose you corrected invoice.

Yours truly.
Davis & Holt.
Per D.

Letter Requesting a Loan

Denver, Colo., May 1, 1904.

Mr. Frank Smith,
Colorado Springs, Colo.

Dear Sir:—Much as I dislike the idea of asking any one to be inconvenienced by my circumstances, I am obliged to borrow Twenty-five Dollars until the first of June, and I take the liberty, knowing your confidence in me and your generosity, to ask if you can accommodate me with a loan.

I am sorry to trouble you, but hope you will pardon me if I have trespassed on your kindness.

Believe me,
Gratefully yours,
John Longley.

Giving Notice of Note Coming Due

Burlington, Iowa, 3/10/04.

Mr. D. E. Holtz,
Des Moines, Iowa.

Dear Sir:—Your note for Fifty Dollars ($50.00), dated Sept. 30, 1903, at six months, and made in our favor, will be due and payable at the State National Bank on the 30th inst.

Kindly provide for same, and oblige,
Yours truly,
Kerr & Keck.

Letter Enclosing Note for Collection

Louisville, Ky., April 5, 1904.

FARMERS' AND MERCHANTS' BANK,
Joplin, Mo.

Gentlemen:—We enclose a note for Sixty-five Dollars ($65.00), drawn by J. K. Watson of your town, and due the 30th of this month.

Kindly collect the amount of same, together with six months' interest due, and remit the proceeds to us in Chicago or N. Y. exchange.

Thanking you in advance, we are, Yours truly,

RILEY & RIDNOUR.

Letter Enclosing Bill of Lading to Bank for Collection

Moline, Miss., April 8, 1904.

FIRST NATIONAL BANK,
Syracuse, N. Y.

Dear Sirs:—We enclose herewith bill of lading to our name endorsed in favor of Mr. John Marten, 10 Beaver St., your city.

Kindly deliver said bill of lading to Mr. Marten upon payment of Forty Dollars ($40.00) and the cost of remitting the amount to us in N. Y. exchange.

Thanking you for your kind attention to the above, we are,

Yours truly,

OXFORD PUB. CO.

Letter of Resignation

Streator, Ill., May 1, '04.

Messrs. HOFFMAN MFG. CO.,
City.

Gentlemen:—Having decided to go into business for myself, I am therefore obliged to resign my position and ask to be relieved from my duties the first of June next.

Permit me to say that it is with feelings of regret that I sever my connection with associations that have always been of the most pleasant character.

Yours very respectfully,

GEO. W. HARDING.

Letter Advising Shipment on Commission

Grand Haven, Mich., Aug. 25, 1903.

Messrs. HILL & LERNE,
Commission Merchants,
Chicago, Ill.

Gentlemen:—As per our previous arrangements, I am shipping you to night via Steamer Conger, on consignment,

500 baskets of choice peaches.

Kindly take care of same and dispose of them at the best price obtainable and place the proceeds to the credit of my account. Yours truly,

J. B. GREGG. (Shipper)

Letter Giving Notice of Traveler's Call

(*Printed Letterhead.*)

Jan. 10, 1904.

Messrs. Kingman, Brown & Co.
Boston, Mass.

Gentlemen:—Our representative, Mr. A. K. Parks, expects to call upon you about the first of February with a full line of samples of the latest and best in knitted goods.

We trust you will defer placing your order until you see what we have to offer, as we believe we have exceptional values for the trade this year.

Thanking you for your many past favors, we are,

Respectfully yours,
Kenzie Knitting Mills,
J. D. K.

An Order on a Business House for Goods

Troy, N. Y. May 2, 1904.

Messrs. Arthur & Comrie,
City.

Gentlemen:—Please deliver to the bearer, Mr. Chas Wright, goods that he may select, not exceeding in value Fifty Dollars ($50.00), which you may charge to our account and mail us invoice for same.

Your kind attention will oblige,

Yours truly,
Scott & Co.

Letter Complaining of Shortage in Goods

Fresno, Cal., May 10, 1904.

Messrs. Harrison Weir & Co.,
59 Lake St., Chicago, Ill.

Gentlemen:—Your shipment of Gold Soap, which left Chicago on the 3rd of April, reached us to-day, and we find same to be ten boxes short.

We return you herewith freight receipt, which does not correspond to the bill of lading or your invoice, and ask you to kindly investigate the cause of the shortage.

Yours very truly,
Peterson Bros.
Per J. D. P.

Letter Giving Notice of Dissolution of Partnership

Mendota, Ill., April 9, 1904.

We hereby give notice that the partnership heretofore existing and doing business under the firm name of Shaw & Bentley has been this ninth day of April, 1904, dissolved by mutual consent, and Mr. Shaw appointed to collect all outstanding debts and settle all accounts of said firm.

Jas. D. Shaw.
C. R. Bentley.

The above notice may be either published or addressed to individuals interested in the change.

Letter Complaining of the Non-Arrival of Goods

Toronto, Can., 3/8/04.

Messrs. Allen & Lee,
Detroit, Mich.

Gentlemen:—The shipment of Art Goods which you made to us the 15th of last month has not yet arrived. We have been advised by the Customs Department that they are being held for invoice.

Kindly mail copy of Certified Invoice to the Department at Windsor, and urge them to pass the goods at once, obliging,

Yours truly,
Roberts & Co.

Requesting Address of Paper Changed

Concord, N. H., May 2, 1904.

Messrs. Herald Pub. Co.,
Boston, Mass.

Gentlemen:—Will you please change the address of my "Herald" from J. K. Good, 79 Palace St., to J. K. Good, 94 York St., Concord, N. H., and oblige?

Yours truly,
J. K. Good.

LETTERS REQUESTING SPECIAL FAVORS

A letter making a request of any kind should approach the subject in a direct manner. The nature of the request should be stated at the beginning, and any explanation necessary for making the request should follow, and be brief and to the point.

If necessary to ask for a remittance on an account not yet due, for the privilege of drawing on a prompt paying customer, or for an extension of time on an account or note, special care should be used in wording the request.

The following will serve as examples:

Bellevue, Mich., April 15, 1904.

Messrs. Kingman & Son,
Detroit, Mich.

Gentlemen:—For some time past our business has been tied up to such an extent, on account of circumstances over which we have no control, that we are obliged to ask you if you can favor us with a remittance covering one-half your account. We will be glad to extend the time for the payment of the balance to the 15th of Sept. provided you can accommodate us with your check by the 20th inst.

We anticipate a speedy adjustment of our difficulties, and hope this will be the only time we will be under the necessity of calling on you for your account before due.

Kindly wire your reply at our expense. Thanking you in advance, we are,

Respectfully yours,
Henry Morgan & Co.

Asking Note Extended

Red Oak, Iowa, Jan. 10, 1904.

PERRY, HARTMAN & CO.
Des Moines, Iowa.

Dear Sirs:—We find that we will be unable to meet our note for Two Hundred Dollars ($200.00), due the first of February, and write to enquire if you will kindly extend the time of payment to the first of March. By that time we will be able to meet principal and interest in full.

We are sorry to have to ask this, and if not convenient for you, kindly notify us by return mail so that we may make other arrangements. We trust, however, you can accommodate us, and desire to thank you in advance for the favor.

Yours very respectfully,
JAMES DENNIS & CO.

LETTERS OF INTRODUCTION

Letters of Introduction may be either of a social or business nature. The fact that a letter is given is usually considered as an indorsement of the bearer, therefore, in introducing a business acquaintance care should be exercised that the person introduced be one you can safely recommend, and your letter worded so that you will not be obligating yourself further than you intend.

Letters of introduction should not be sealed, as the person introduced has a right to know what the letter contains.

The following will serve as an example:

Dixon, Ill., April 7, 1904.

Mr. J. B. KENNEDY,
15 Spruce St., Louisville, Ky.

Dear Sir:—This will introduce to you my friend, Mr. Harold Rogers, who represents the Gibson Manufacturing Company of Chicago, engine builders, who desire to open a branch office in your city.

Any assistance you may be able to give Mr. Rogers in securing a suitable location will be greatly appreciated by me.

Yours very respectfully,
WM. SEARS.

Besides the address of the person or firm to whom the letter is addressed, the envelope should have on the lower left-hand corner the following: *Introducing Mr. Harold Rogers.*

Letters of Indorsement

A letter introducing a business acquaintance for the purpose of opening business relations between him and the persons to whom he is introduced is called a letter of *indorsement.* If the person asking such a letter is known to be financially responsible and of good character and business ability, little risk

is assumed; but unless he is known to possess these qualities the letter better not be given.

Letters of indorsement should not be sealed if delivered to the person requesting them.

The following is a safe form:

Muskegon, Mich., May 1, 1904.

Messrs. Edison Electric Co.,
Kalamazoo, Mich.

Gentlemen:—The bearer, Mr. Robt. West, is preparing to engage in business in Grand Rapids, Mich., and calls on you for the purpose of examining your goods.

Nine years' acquaintance with Mr. West justifies us in stating that he is a gentleman of sterling qualities and business ability, and knowing the field in which he is about to locate, we have no hesitation in saying that you will find it profitable to extend to him every courtesy.

Very truly yours,
Robt. Walton & Son.

Letter Incurring Direct Liability

110 Lincoln St.,
Rockford, Ill., 3/8/04.

Messrs. Jas. Ray & Co.,
90 State St., Chicago, Ill.

Gentlemen:—This will introduce Mr. R. E. Higgins of our city, who wishes to purchase goods on thirty days' time.

We have known Mr. Higgins for the past fifteen years, and confidently state that he is good for whatever contracts he may make.

You may consider this letter indorsement to the extent of One Thousand Dollars.

Respectfully yours,
Cole & McKenzie.

LETTERS OF RECOMMENDATION.

In giving a letter of recommendation it should always be borne in mind by the writer, that in recommending another, three persons are liable to be affected by it.

If not carefully worded the applicant might be entrusted with duties or responsibilities on the strength of such a letter, that he is totally unfit for, and consequently the employer would suffer loss and be put to inconvenience, the applicant instead of being benefited would be disgraced, and the writer's reputation for good judgment and truthfulness be injured.

If the applicant merits commendation it should never be withheld; but the letter should never overdraw or state more than he is capable of fulfilling.

The letter may be addressed to the person or firm to whom the bearer desires to make application; or it may be written

without address, or "*To whom it may concern.*" In either of the latter ways it may then be presented to any one the bearer chooses.

The following are some of the usual forms:

Utica, N. Y., Jan. 26, 1904.

Messrs. J. Peterson & Co.,
Hillsboro, Iowa.

Gentlemen:—We take pleasure in stating that Mr. Will Cameron, who has been in our employ for the past three years, as clerk, has by the faithful performance of his work and his manly, upright character, won for himself the respect and confidence of every one connected with our establishment.

We regret that failing health compels him to seek outside employment, and we heartily recommend him as a trustworthy, capable and energetic salesman.

Yours very respectfully,
Kenneth Stevens Co.

An Open Letter of Recommendation

Atlanta, Ga., April 20, 1904.

To Whom It May Concern:—

This is to certify that the bearer, Mr. George J. Bailey, has been in the employ of our company for the past two years, as bookkeeper, and that he has proven himself to be capable, energetic and faithful, a young man of good habits, and fine Christian character, and we heartily recommend him to anyone desiring the services of a competent bookkeeper.

He leaves us to better his position, and carries with him our best wishes for his success.

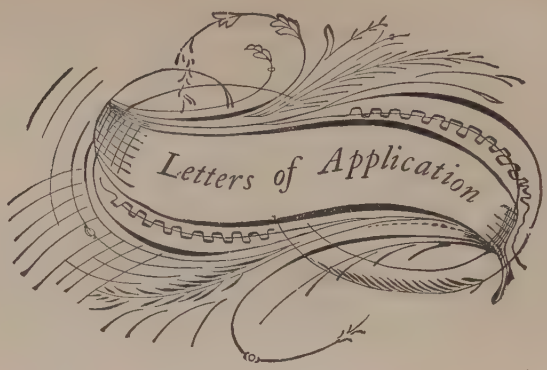
Respectfully,
Carter Co.
Per J. C. Carter, Prest.

29 Woodward Ave.,
Cleveland, Ohio, March 10, '04.

The bearer, Miss Jennie Comrie, has been superintendent of the millinery department of our dry goods house for several years, and we take pleasure in stating that her services have been very satisfactory, and we would be glad to retain her at an advanced salary, but she has decided to go west.

We cheerfully recommend her as being a lady of exceptionally good judgment in her line of work and capable of holding the best class of trade.

Jones & Benedict.



A Letter of Application should be the best specimen of letter the writer can produce, both as to the penmanship and composition. Remember the experienced eye of the business man will readily detect the errors, if any, and not only that, he forms an estimate of your qualities by the letter you write.

The following suggestions may be helpful:

1. Write your letter of application *yourself* and do not apply for a position you doubt your own ability to fill.

2. Write respectfully, and modestly, frankly stating your qualifications, without boasting.

3. Be sure the form of your letter, the grammar, punctuation, spelling, and use of capitals are correct.

4. Let the writing be neat, the letter free from blots and erasures, even if you have to rewrite it half a dozen times.

5. If making a personal application, and you are asked to write your letter then and there, be prepared. Keep your thoughts collected and put these suggestions into practice.

6. Replying to an advertisement, state when and where the advertisement was seen. Make application for the position advertised, and answer all the requirements.

Salesman's Application

La Grange, Ill., April 10, 1904.

Messrs. Armour & Co.,
Chicago, Ill.

Gentlemen:—Replying to your advertisement in Saturday's "Record-Herald" for a city salesman. I respectfully apply for the position you offer. I have had three years' experience as salesman for a line of goods selling to

grocers and butchers, and know the city and the trade thoroughly. All I ask is an opportunity to prove my ability to sell goods.

I respectfully refer you to J. H. Boony & Co., 10 S. Water St., Chicago, or John D. Mills, 169 Market St., Chicago.

I shall be glad to call on you for a personal interview.

Yours very truly,
L. A. Foster.

Application for Position as Clerk

Springfield, Ill., May 1, 1904.

Marshall & Dunne,
Glencoe, Ill.

Gentlemen:—Learning through a friend of mine that your business is increasing to such an extent that you require the services of another clerk, I hereby respectfully apply for the position. If I am accepted I will faithfully serve you to the best of my ability, and your interests will be my first consideration.

I shall be glad to furnish testimonials as to my character, ability, etc.

Hoping to hear from you favorably, I am,

Yours very respectfully,
Clinton McNeil.

LETTERS REQUESTING PAYMENT

The composition of a letter requesting payment of an account is often a perplexing task, particularly if the person or firm is capable of paying, but careless about it. Such a letter, to be perfect, must not only obtain the money due, but do so without giving offense. Such letters should not, as a rule, be blunt or abrupt, but should courteously and clearly state the reasons for the request. If it becomes necessary to suggest placing the account in the hands of a collector, the suggestion should not be put in the form of a threat but in such language as will show your reluctance about using such means. Generally speaking, a statement of the debtor's account is usually all that is necessary to remind him that payment is expected when due.

If necessary to request prompt payment, something like the following may be used:

New York, N. Y., May 1, 1904.

Mr. D. C. Gowan,
Oswego, N. Y.

Dear Sir:—Inclosed please find statement of your account for April, which we trust you will find correct.

We would appreciate it if you will kindly check same at your earliest convenience and send us a N. Y. Draft for the amount.

Yours truly,
Smithson & Dewsnap.

If the debtor is tardy a second request might be worded as follows:

New York, N. Y., May 20, 1904.

Mr. J. G. Homer,
Newark, N. J.

Dear Sir:—We respectfully call attention to your account, which is now some time past due, and ask if you cannot favor us with your check by return mail.

or,

Not hearing from you regarding the amount of your account, now past due, we take the liberty of drawing on you at three days' sight, and trust that you will kindly honor the draft when presented.

Thanking you in advance, we are, Yours truly,
Connor & Blaine.

Concord, N. H., April 1, 1904.

Messrs. Maxwell & Gordon,
Trenton, N. J.

Gentlemen:—The Second National Bank has this morning returned to us our Draft on you, dated March 10th for Fifty-four Dollars ($54.00) with the explanation, "No attention paid to notice." Since we have given you all the time you asked for the payment of your account, unless some satisfactory explanation is forthcoming you will put us under the necessity of placing your account in the hands of our collector.

Awaiting a prompt reply, we are, Respectfully,
Davis & Lawrence.

LETTERS OF APOLOGY

He is an unmanly man who has not grace to apologize for inflicting a wrong, knowingly or otherwise.

If you owe an apology, make it promptly. The longer you let it go, the harder it becomes to offer. Failure to pay an account or keep a business engagement may be unavoidable, but neglect to explain matters invariably leaves a bad impression on the one to whom the explanation is due.

Apology for Failure to Keep a Business Appointment

Akron, Ohio, Jan. 27, 1904.

Mr. J. Northcott
Columbus, Ohio.

Dear Sir:—I very much regret that I was unable to meet you at the "Conwell House" yesterday as I had expected. Owing to a smash-up on the road, my train was so much behind time it was impossible for me to keep the engagement.

If you will kindly inform me when it will be convenient for you to see me I will be glad to arrange my business and meet you on whatever date you may suggest.

Sincerely yours,
WM. J. KING.

Apology for Failure to Pay an Account

Watertown, S. D., April 4, 1904.

Messrs. GEO. MOORE & Co.,
Fargo, N. D.

Gentlemen:—We owe you an apology for not having settled our account the first of the month as promised. We have been disappointed in not receiving returns for several large shipments the past month, but expect to be able to settle our account in full not later than the 20th inst.

If you will kindly give us this extension of time we assure you the account will then be paid.

Trusting that we have not put you to any inconvenience, we are,

Very respectfully yours,
CONGER & DUN.

Social Correspondence

To be able to write suitable letters of friendship is an accomplishment very much to be desired, and ought to be an aspiration of every one, for while all do not have business letters to write, yet there is scarcely any one who is not called upon at some time to write letters of a social nature.

While many persons write good business letters they may find it necessary to cultivate greater ease of expression in their social letters than the terse style they use at their office desks.

The Paper.—The size and kind of paper will depend somewhat upon the purpose for which it is to be used. Generally speaking, what would be suitable for business letters would not be for social correspondence, excepting *Commercial Note*, 5x8 in., which may properly be used for either. This size is the most suitable for gentlemen. Ladies generally prefer *Billet*, 4x6 in., *Octavo Note*, 4½x7 in., although other sizes are in use.

Lightly tinted and perfumed paper may be used by ladies, but it is not good taste for gentlemen to use either.

Inks.—Black or blue-black inks are the only colors that should ever be used.

Pens.—Whatever is most suitable to the style of your penmanship.

Envelopes.—Two styles are in general use. One, nearly square, to contain the note sheet folded once, and the other oblong, which contains the note sheet folded twice, once each from top and bottom. These are a little larger each way than the folded sheet. They should be of the same color as the paper.

Parts of a Letter.—Much of what has been said regarding the parts of a business letter applies to the parts of a social letter.

Heading.—Form and position the same as in business letters.

Address.—When the address is given in social letters its proper position is at the close of the letter, on the next space below the signature, and commencing at the left-hand side of the sheet at the marginal line. Many social letters written nowadays do not contain any address, the salutation being made to do duty for both, yet the address, placed at the close, imparts a tone of respect to the letter, and may always be added with propriety, especially in writing to our superiors.

Salutation.—What has been said regarding the salutation in business letters applies in social letters. The position of the salutation is the same as the first line of the address in business letters, and the familiarity and warmth of the expression used depends entirely upon our relationship or intimacy with the friend written to, and the subject of our correspondence.

The qualities that combine to make an agreeable associate are required to make a desirable correspondent, and too great familiarity is not one of them.

The circumstances and variety of expressions are so many that we refrain from giving examples.

Body of the Letter.—The body of the letter in social correspondence usually begins to the right of the salutation and on the next line below. Both sides of the sheet may be written on if the letter is more than one page in length.

The Complimentary Closing.—Occupies the same position as in a business letter and should be in keeping with the salutation, and the subject of the letter.

The Signature.—Usually in letters of intimate friendship only the given name is signed. One point in favor of signing the whole name is this: if there is any uncertainty about the letter reaching the person to whom you address it, your name will insure the letter being returned to you in case it is sent to the Dead Letter Office.

LETTERS OF AFFECTION

Letters of Affection are such as grow out of our regard for others. They are as different as our relations to others, and may be simply the expression of kindly feeling or of the strongest impulses that move the human heart.

Letters of affection add much to human happiness, and more of them should be written. To that boy away from home, or father, mother, or sister at home, what gladness a good letter brings! Our pleasure in receiving such letters should remind us of our duty to our dear ones in the matter of writing them.

Letters of this class may often be enlivened by playful allusions, jests and familiarities, provided the writer is sure he will not be misunderstood.

The most elegantly composed letter will not bring one-half the pleasure to a far-away relative that a simple letter crowded with feelings of home life and home love will.

Since no form would perhaps fit one case in a hundred we only give the following example, which we consider a model of good-humored playfulness, and without formality, written by Dr. Franklin to his wife:

Easton, Nov. 13, 1756.

My Dear Child:—

I wrote to you a few days since by a special messenger, and enclosed letters for all our wives and sweethearts, expecting to hear from you by his return, and to have the Northern newspapers and English letters per the packet; but he has just now returned without a scrap for poor me. I had a good mind not to write you by this opportunity, but I never can be ill-natured enough, even when there is the most occasion.

The messenger says he left the letters at your house, and saw you afterwards at Dr. Duche's, and told you when he would go, and that he lodged at Hovey's, next door to you, and yet you did not write; so let Goody Smith give one more just judgment, and say what shall be done with you.

I think I won't tell you that we are all well, nor that we expect to return about the middle of the week, nor will I send you a word of news,—that's Poz.

My duty to mother, love to children and to Miss Betsey and Gracy, etc.,etc.

I am your loving husband,

Benjamin Franklin.

P. S.—I have scratched out the loving words, being written in haste by mistake when I forgot I was angry.

LETTERS OF FRIENDSHIP

Letters of Friendship make up that large class of written messages that strengthen the bonds of friends absent from one another. The chief charm of such a letter is its natural, conversational style. It should cause the person reading it to feel as though he had been favored with a pleasant visit, rather than a formal call.

Thus, Bayard Taylor, while in Germany, writes to an intimate friend in America:

"Your letter came four or five days ago, and I take my first leisure to answer it. I take it for granted that this will find you in your Tenth Street rooms, which are so clear in my memory that a letter is more like a personal meeting to me than when you were in Rondout. You somehow manage to bring your own bodily self before me when you write: I see your eyes and the changing expression of your face, as I read, and the sound of your voice accompanies the written words. Thus your letters are most welcome, no matter what you write. * * * "

To another:

"You made your short note so pleasant that I can't scold you for its brevity; yet I should like to. There might have been so much more of what may seem personal or domestic 'nothings' to you, yet have such value at this distance. * * *"

Freshness and originality in expression should be cultivated, especially in the opening and closing sentences. Avoid old and time-worn phrases as,

"I thought I would write you letting you know," "I now take my pen in hand," etc.

How refreshing to receive a letter from a friend who begins to talk to us from the first line; for instance,

"It was kind of you to send me a good, long letter while I was lying all alone in my room with nothing to do but take villainous doses of medicine;"
"It was a delight to me to see your hand on an envelope again;"
"I found your letter waiting for me on Monday when my holiday closed."

Compare also such closing sentences as:

"Having told you all I know or care to write, I will now close;"
"I must bring my letter to a close, as I have nearly filled the sheet;"

with such as

"Recollect that I am absent and you are at home, so your letters are worth the most;"
"Remember me very kindly to your brother and my old friends on the hill, and believe me, "Yours very sincerely,
"_____."

To be perfectly free and unrestrained in familiar letters, forms may be set aside in a pleasing manner, especially in the beginning of a letter. Some of our best authors set us good examples, as:

Boston, Dec. 10, 1840.

Don't, dear Lieber, be offended by my long silence. For the last few days I have been all the time in court. * * *

Ever and ever yours,

CHAS. SUMNER.

(*Sumner to Mr. Tower.*)

Never, my friend, when the heavens have been dressed in their scorching robes of brass for weeks, was a drop of rain more grateful than your timely epistle. * * *

(*Sydney Smith to Lady Grey.*)

Dec. 8, 1838.

Awkward times, dear Lady Grey! However, you see those you love sooner than you otherwise would have seen them. * * *

(*To Lady Holland.*)

If all the friends, dear Lady Holland, who have shared in your kindness and hospitality * * *

Gad's Hill, Oct. 3, 1866.

MY DEAR FIELDS:—

I cannot tell you how much I thank you for your kind little letter, which is like a pleasant voice coming across the Atlantic, with that domestic welcome in it which has no substitute on earth. If you knew how strongly I am inclined to allow myself the pleasure of staying at your house, you would look upon me as a kind of ancient Roman (which I trust I am not) for having the courage to say no. But if I gave myself that gratification in the beginning, I could scarcely hope to get on in the hard "reading" life, without offending some kindly disposed and hospitable American friend afterwards; whereas, if I observe my English principle on such occasions, of having no abiding place but a hotel, and stick to it from the first, I may perhaps count on being consistently uncomfortable.

The nightly exertion necessitates meals at odd hours, silence and rest at impossible times of the day, and a general Spartan behavior so utterly inconsistent with my nature, that if you were to give me a happy inch, I should take an ell, and frightfully disappoint you in public. I don't want to do that, if I can help it, so I will be good in spite of myself.

Ever your affectionate friend,

CHARLES DICKENS.

LETTERS OF CONGRATULATION

Letters of Congratulation are those written to friends upon any occasion of success, joy, honor, or advancement, or when they have in any way been especially favored. They should only be written when we can heartily enter into the spirit of rejoicing with the one to be congratulated. Nothing but the most natural, hearty and genuine feelings of joy should be expressed in our letter, and that in our happiest way of putting it.

Letters of congratulation are generally brief—sometimes only a telegram—and contain nothing regarding other matters. It depends somewhat upon the occasion, how much may be said in the letter, as, for example, the following written by Charles Sumner to a friend just home after some absence from his family.

Hudson, on the North River,
Tuesday Evening, Sept. 28, 1841.

DEAR LIEBER:—

Here I am imprisoned by the rain in the inn of a Yankee village. Longing for companionship, I write to you, and while I write, imagine that I have it—as the ostrich supposes himself free from danger when he has thrust his head in the sand. * * *

I trust you have had fair breezes and this letter will find you with her who loves you so well and with your boys frolicking about you. Ah! my dear Lieber, are you not happy? I know where you live. I wish your home were more according to your heart; but you have sources of the highest happiness—domestic bliss of the rarest kind; constant and honorable employment for your time; a distinguished name; and the consciousness of doing good, of aiding the cause of truth, of education, and government.

I know few persons who have such reasons for blessing God as you. * * *

Ever yours,
CHARLES SUMNER.

Congratulating a Lady on Her Marriage

St. Paul, Minn., May 19, 1904.

MY DEAR EVA:—

It was with heartfelt pleasure that I learned of your marriage to Mr. Howard, and I pray that time may but unite more closely your heart to that of the noble man to whom you have confided your life's happiness.

Hoping I may hear from you soon, and that you will pay me a visit on your return, I remain your old friend and schoolmate,

EMILY BLANCHARD.

To Mrs. Eva Howard, Washington, Oregon.

Congratulating a Gentleman on His Marriage

Concord, Mass., Nov. 9, 1904.

My Dear Mr. Allen:—

I hasten to offer you my congratulations and sincere good wishes in regard to your recent happiness. I hope that each day may but add to the domestic joys of yourself and estimable wife. Yours sincerely,

Mrs. D. J. Wightman.

Congratulating a Friend on the 25th Anniversary of Wedding

Melrose, Fla., Sept. 9, 1904.

My Dear Mrs. Adams:—

If my memory is faithful, it is just twenty-five years to-day since I had the pleasure of congratulating your good husband upon his wedding and tendering to you my sincere good wishes.

Permit me to congratulate you both upon having completed the silver circle, and offer my best wishes that you may long live together and experience as much happiness in the future as your faces prove you have enjoyed in the past. With best regards to yourself and husband, I am,

Your friend,

Chas. Oker.

Congratulating a Friend on the Birth of a Son

Vernon, Pa., June 19, 1904.

My Dear Mr. Gardner:—

Allow me to present to you my most hearty congratulations on the birth of your son, and my sincere hopes that he may prove in very truth a blessing to his parents, and the pride and comfort of their old age. As for the little fellow himself, I could wish him no greater happiness than to be born of such parents and in such a home. Your friend,

John Cullen.

LETTERS OF INTRODUCTION

Like letters introducing acquaintances for business purposes, social letters of introduction should be given only when the person writing them is satisfied that it will be desirable for all parties concerned. Your letter is an endorsement of your friend's character and qualities and if they are not all that might be desired, it reflects on you.

You may speak in complimentary terms of your friend, but not in such a way as to make him feel embarrassed in presenting the letter.

Residents should first call upon a new neighbor unless he brings a letter of introduction. In that case the new-comer may call first. If a stranger sends you a letter of introduction and his or her card, it is your duty to call the next day, or send an invitation to call upon you.

The following are examples of letters of introduction:

Hudson, N. Y., April 2, 1904.

Mr. H. R. Belden,
Boston, Mass.

My Dear Sir:—This will introduce to your acquaintance my friend Mr. Reynolds, for whom I have great esteem, and whom I am sure you will be happy to know.

Any attention you may have in your power to bestow during his visit to Boston will be gratefully reciprocated by

Your friend,
H. S. White.

Newfane, Wis., Dec. 9, 1903.

Mr. T. H. Griffin,
Springfield, Ohio.

Dear Sir:—I take much pleasure in introducing to you my esteemed friend, Miss Clara Harland, a young lady who will spend a few months in your city. I am sure an acquaintance with her will be a pleasure to you.

Any favor you may show her during her stay in your city I shall consider a personal one.

Yours sincerely,
Mrs. J. H. Howard.

Hartford, Conn., May 6, 1904.

My Dear Miss Johnson:—

My friend, Mr. T. E. Carter, purposing to make his home in your city, I venture upon the kind hospitality you have always extended to me to introduce him to yourself and family. Trusting that the acquaintance will be as pleasant as mine has been with both yourself and him,

I am, very respectfully,
Your friend and well-wisher,
J. F. Glennon.

LETTERS OF CONDOLENCE

Letters of condolence are written to express sympathy with those who have suffered loss or bereavement. The task, especially in the latter case, may not be an easy one, for if improperly worded instead of bringing comfort it might only add to the sorrow. The difficulty of the task should not prevent us from performing our duty to the best of our ability.

Let your letter be brief. Show your own sorrow or sympathy in well chosen words.

Be considerate, and omit mentioning names and the details of the sorrow, as they only open afresh the wounds.

Do not try to point out what might have been if this or that had been done.

Give comfort, or withhold writing. A fine example occurs in the correspondence of Charles Sumner, and part of his beautiful letter to Charlemagne Tower on receiving news of the death of Mr. Tower's father, is here given.

Cambridge, Friday Morning, May 11, 1832.

My Dear Friend:—

The moment I saw the black seal of your letter, my mind anticipated the sorrowful intelligence it bore. Permit me to join with you in grief. I offer you my sincere sympathies. The loss of a father I can only imagine; may God put far distant the day when that affliction shall come upon me! You have been a faithful son, and I know a joy to his eyes. I reverence the spirit with which you have sacrificed all your professional and literary predilections. You did that for your father's sake, and the thought that you did it on his account must be to you a spring of satisfaction and consolation as hallowed as the grief you feel. * * *

Believe me ever your true friend,

Charles Sumner.

Perhaps no better specimen of a letter of condolence can be found than the following, from the pen of the lamented Lincoln. The original letter adorns the walls of a hall in the College of Brasenose, at Oxford, where it is looked upon with deep interest by American visitors and is treasured by the authorities of the college. It explains itself.

Executive Mansion,
Washington, Nov. 21, 1864.

Dear Madam:—

I have been shown in the files of the War Department a statement of the Adjutant-General of Massachusetts, that you are the mother of five sons who have died gloriously on the field of battle. I feel how weak and fruitless must be any word of mine which should attempt to beguile you from the grief of a loss so overwhelming. But I cannot refrain from tendering to you the consolation that may be found in the thanks of the Republic they died to save. I pray that our Heavenly Father may assuage the anguish of your bereavement, and leave you only the cherished memory of the loved and lost, and the solemn pride that must be yours to have laid so costly a sacrifice upon the altar of freedom.

Yours very sincerely and respectfully,

Abraham Lincoln.

To Mrs. Bixby,
Boston, Mass.

To a Friend on Loss of Home by Fire

Albany, N. Y., July 4, 1904.

My Dear Mrs. Holmes:—

I have just learned of your loss of last evening, and hasten to offer you my sympathy; for, except loss of life, there can be none greater than that of the home, round which so many pleasant memories cling, and in which we have gathered so many household treasures which no money can replace. I know also what a feeling of desolation must come over you to-day.

Accept my earnest sympathy, and, if I can in any way aid you, do not fail to call upon me. Yours,

E. A. DeWitt.

To a Friend on the Death of a Son

Milwaukee, Wis., Oct. 2, 1904.

Mr. Eugene Eagan,
Yankton, New York.

My Dear Friend:—It is with deepest sympathy that I write to you, realizing how profound must be the sorrow when he is taken away who, for so many years, has been the comfort and pride of a father's declining life. Still a few more days here, and I trust we will all be united to friends who have been mercifully, no doubt, taken away from us who mourn here below.

I need hardly say that you can now, more than ever, rely upon my aiding you in any way in my power. Your most sincere friend,

Charles D'Orsay.

LETTERS OF LOVE AND COURTSHIP

No class of letters consumes so much time and thought, or causes the writer more anxiety than love letters; however, when true affection prompts the message, little guidance will be needed in the composition.

The charm of this correspondence lies in the similarity of tastes, and the tone of earnest affection which is given to the message.

Never indulge in flattery, but remember the first element of lasting affection is respect.

Ladies especially should be careful to preserve their dignity, and guard their future reputations when committing anything to paper.

Secret correspondence should not be indulged in. Liberty from parents or guardians should always be sought first.

We give no samples of love letters. No one would want to receive one written in a copied form. If to be without a copy leaves a fellow to make a fool of himself, better for the other party to find it out early.

Asking Permission to Call

16 Hawley St., March 15, 1904.

DEAR MISS BREE:—

Presuming somewhat upon our former acquaintance, I hope to be pardoned for this little note, which is to ask permission to correspond with you, and also to have the pleasure of calling on you at your home.

Anxiously awaiting a favorable reply,

I am very truly your friend,

CHARLES G. VENN.

Miss Mary E. Bree,
204 Elm St., City.

A Favorable Reply

204 Elm St., March 16, 1904.

DEAR SIR:—

Our former acquaintance, though not extensive, has been pleasant, and I do not find it in my heart to object to your kind request.

With pleasure I subscribe myself, Your sincere friend,

MARY E. BREE.

An Unfavorable Reply

City, March 16.

DEAR SIR:—

Your very kind note has been duly received, and in reply I am permitted to say but this: Although highly flattered by your request, I am not at liberty to grant it. With sincere regards,

I remain your friend,

MARY E. BREE.

Charles G. Venn,
16 Hawley St.

From a Gentleman to the Father of a Lady, Requesting Her Hand in Marriage

No. 356 Greenwood Ave.,
Aurora, Ill., March 25, 1904.

Mr. JOHN FENTON,
Aurora, Ill.

My Dear Sir:—I am certain you will not be surprised when I tell you that, through my frequent visits at your house and your kind hospitality to me, I have learned to regard your daughter with a most sincere affection. Knowing that her welfare and happiness must be the first consideration with you, I hasten to acquaint you with my feelings.

I am, as you are aware, not lacking in this world's goods; and, if an honest and sincere affection can secure her happiness, these certainly shall not be wanting. Will you trust her to me? I anxiously await your answer.

Very respectfully,

CLARENCE SHAW.

Notes of invitation for large gatherings are usually engraved or printed and should be sent at least a week or ten days in advance, and should be written in the third person.

Among friends of long acquaintance a familiar note is in better taste.

For less informal gatherings, invitations may be sent out nearer the date of the occasion, and need not necessarily be written in the third person.

Notes of invitation for teas, luncheons and evening parties should be written in the name of the hostess.

The time-worn custom of *presenting compliments* in an invitation is passing out of usage.

Invitations to dinner, breakfast, or luncheon require prompt answers, and the answer should be written in the same form as the invitation.

Invitations to receptions or an "At Home" do not require an answer. If the person receiving an invitation is unable to attend an "At Home or "Afternoon Tea" it is proper to send her card the afternoon of the occasion.

Wedding invitations should be issued not later than fifteen days, nor earlier than four weeks before the date of the ceremony.

They are either engraved or printed (printers now have several fine lines of type that produce work about equal to engraving) on fine white or cream tinted paper, the correct size of which is about $7\frac{1}{4}$x$6\frac{1}{2}$ inches and folds once to fit the envelope.

INVITATIONS TO LUNCHEON

Mrs. John Cass Morgan

requests the pleasure of

_____

company at luncheon

on .....

at ..... *o'clock*

Ten Park Avenue.

Invitation by Note

69 Dorchester St., May 12, 1904

DEAR MRS. PATTERSON:—

I should be pleased to have you lunch with me on Tuesday, the ninth, at half past one o'clock.

Trusting no previous engagement will compel you to deny us the pleasure of your company, I am, Sincerely yours,

ETHEL B. HARRIS.

or

It is quite correct for the hostess to mail her calling card, with the announcement,

Luncheon at 1:30 o'clock

May ninth

written beneath her name.

Invitations to Receptions

These invitations are now sometimes issued in the name of the gentleman as well as that of his wife, reading,

Mr. and Mrs. Henry Coghill

at home

Thursday afternoon, April 28

from four until seven o'clock

Twenty-six Congress Ave.

When a mother and daughters receive, the card is in this form,

Mrs. Henry Coghill,

The Misses Coghill

at home

Etc.

Invitation to Evening Party

Mrs. Elliott requests the pleasure of Mr. and Mrs. Shaw's company on the evening of May 4th at eight o'clock.
14 Kingston Place.

Invitation to Ride

Mr. Bell would be much pleased if Miss Rennie would accompany him in a drive to Lookout Point this afternoon at two o'clock, May 10th, 1904.

ANSWERING INVITATIONS

Accepting Invitation to Lunch

Mrs. William K. Norman

accepts with pleasure

Mrs. John C. Morgan's

kind invitation to luncheon

on Friday, May 6th

at one o'clock

Reply to Familiar Note

DEAR MRS. HARRIS:—

It gives me much pleasure to accept your kind invitation to luncheon on Tuesday, the ninth, at half-past one o'clock.

Sincerely yours,
JEAN A. PATTERSON.

Regret in Answer to Invitation to Evening Party

Mr. and Mrs. Shaw regret that owing to the ill health of their little daughter, they are compelled to decline Mrs. Elliott's kind invitation for May fourth.

Maplewood House.

The ability to gracefully accept or decline an invitation is quite as essential as to know how to write an invitation.

WEDDING INVITATION

Mr. and Mrs. Charles H. Hillman

request the honor of

your company at the marriage of their daughter

Edna May

to

Louis Bates Gould

on Wednesday Evening, May fourth

Nineteen Hundred Four

at half-past six

(church or home address)

At home

Kensington, Iowa

Where a reception follows the wedding, a card of medium size is enclosed with the wedding invitation, and may be inscribed thus:

Reception
from seven o'clock,
Twenty Conklin Avenue

When a wedding has been celebrated with only a few friends present, it is customary to send out announcement cards. They are posted on the day of the wedding to all friends of the bride and groom. The usual form of such announcement reads:

Mr. and Mrs. William Kennedy
have the honor of announcing
the marriage of their daughter
Florence
to
Mr. Abner S. Woodman
on Thursday, May fifth
nineteen hundred and four, at
St. Stephen's Church

This announcement may be accompanied by a card bearing the joint name of the newly married pair, giving the address of their future home.

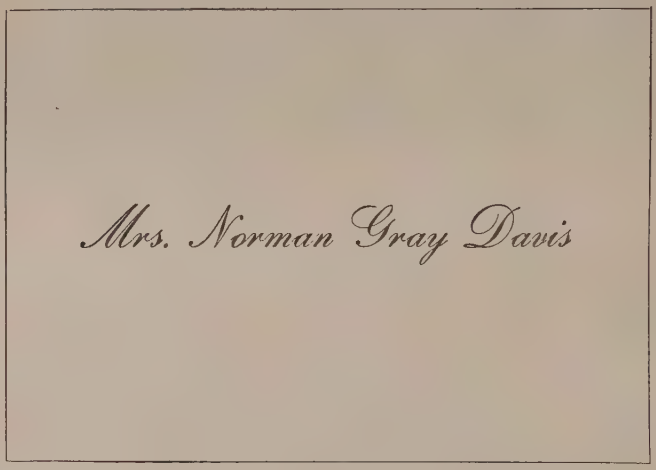
CALLING AND BUSINESS CARDS

Visitings Cards for Ladies.—Usually a married lady's card is larger than the one used by unmarried ladies.

Pure white bristol board of medium weight with the name engraved or printed in script in black ink are the only ones used in good society. Never use bevel or gilt-edged cards or any decorations other than the name, address, and day at home. In small towns the address may be omitted.

An American Lady's card should never bear any title other than *Mrs.* or *Miss.* She is not privileged to use on her card her husband's professional or dignitary title. The wife of the President is merely, *Mrs. Theodore Roosevelt.*

Cards of the most approved style give the full Christian name or names as well as the surname.



If there are not other families of the same name, so that confusion might result, the eldest daughter may omit her Christian name and use a card reading, for example, Miss Davis.

The day of the week on which a lady desires to receive callers may be printed or engraved on the lower left-hand corner, thus, *Thursdays*, etc.

A gentleman's visiting card is both smaller and thinner than a lady's. Style of inscription as follows:

Mr. Albert Louis Coombs

The title Mr. is never omitted unless the name is followed by *Jr.* A man never has an "at home" day on his card.

Business cards are used for introducing a representative of a business house, for advertising, etc. They usually bear the name of the house and address, the nature of the business and the representative's name. No prescribed rule can be laid down as to size, etc.

Titles in Use in the United States

"The President of the United States"; "His Excellency," Governor of any State, and Ministers to foreign countries. "Honorable" is applied to the Vice-President of the United States, members of the Cabinet and members of Congress, heads of departments, judges, consuls, mayors of cities, etc.

D. D., doctor of divinity; LL. D., doctor of laws; Rev., minister of the Gospel; Dr., physician and surgeon; Prof., professor or teacher; Esq., member of the legal profession, etc., indiscriminately used; and other professional titles too numerous to mention.

TITLES OF THE DIGNITARIES AND OTHER OFFICERS OF THE CATHOLIC CHURCH

The Pope, "His Holiness Pius X.;" a cardinal, "His Eminence James Cardinal Gibbons;" an archbishop, "Most Rev. Henry Spaulding, D.D.;" a bishop, "Rt. Rev. M. Flannery, D.D.;" a vicar-general, "Very Rev. Edward Weiss:" a parish priest, "Rev. James Moore, P. P.;" a lady superintendent of a convent, "Sister Superior."

MILITARY TITLES IN THE UNITED STATES

Commissioned Officers

General of the Army (This title lapsed with the death of Gen. Sheridan),
Lieutenant-General of the Army,
Major-General,
Adjutant-General,
Inspector-General,
Quartermaster-General,
Commissary-General,
Paymaster-General,
Surgeon-General,
Brigadier-General,
Brigade Inspector,
Colonel,
Lieutenant-Colonel,
Major,
Captain,
Chaplain,
Adjutant,
First Lieutenant,
Second Lieutenant.

TITLES OF NAVAL OFFICERS

Admiral,
Rear-Admiral,
Vice-Admiral (This title is not now in use),
Commodore (This title has recently been abolished),
Captain,
Commander,
Lieutenant-Commander,
First Lieutenant,
Second Lieutenant,
Ensign,
Midshipman,
Paymaster,
Assistant Paymaster,
Chaplain,
Chief Engineer,
Purser,
Mate — First, Second and Third,
Quartermaster,
Master-at-Arms.

RESOLUTIONS

Resolutions are the expressed opinion of bodies such as councils, societies, committees, or any organization on any matter they may have had under consideration.

Resolutions in form should be prefaced with a preamble, which should state the reason or occasion of the statements that follow, and should bear the signature of the committee framing them.

FORMS OF RESOLUTIONS

Retirement of an Officer

WHEREAS, Our esteemed friend and fellow citizen is, on account of bodily infirmities, compelled to resign as president of our organization; and

WHEREAS, He has for many years filled the office from which he now retires, with great acceptability and universal satisfaction, therefore,

Resolved, That we hereby express to him our sincere thanks for his untiring labors in behalf of our organization and of the public interest, and assure him of our earnest wish that he may enjoy the happiness of a peaceful and serene old age.

Resolved, That a copy of these resolutions, properly engrossed, be presented to him as a mark of our esteem.

Resolution of Thanks

Resolved, That an expression of our appreciation be hereby given to our esteemed chairman, who has presided over the deliberations of this body with impartiality, dignity and marked ability, as well as to the other officers for the faithful performance of duties.

We recommend, That suitable resolutions be drafted by a committee of five appointed by the chair.

Resolution of Sympathy

WHEREAS. It has pleased the Almighty to remove from our midst, by death, our esteemed friend and co-laborer, K. C. Chapman, who has for many years occupied a prominent rank in our midst, maintaining under all circumstances a character untarnished, and a reputation above reproach.

Therefore, Resolved, That in the death of Mr. Chapman we have sustained the loss of a friend whose fellowship it was an honor and a pleasure to enjoy; that we bear willing testimony to his many virtues, to his unquestioned probity and stainless life; that we offer to his bereaved family and mourning friends, over whom sorrow has hung her sable mantle, our heartfelt condolence, and pray that Infinite Goodness may bring speedy relief to their burdened hearts and inspire them with the consolations that Hope in futurity and Faith in God give even in the Shadow of the Tomb.

Resolved, That a copy of these resolutions, properly engrossed, be presented to the family of our deceased friend.

Committee:

R. K. COLLINS,
A. WESTLAND,
J. ANDERSON.

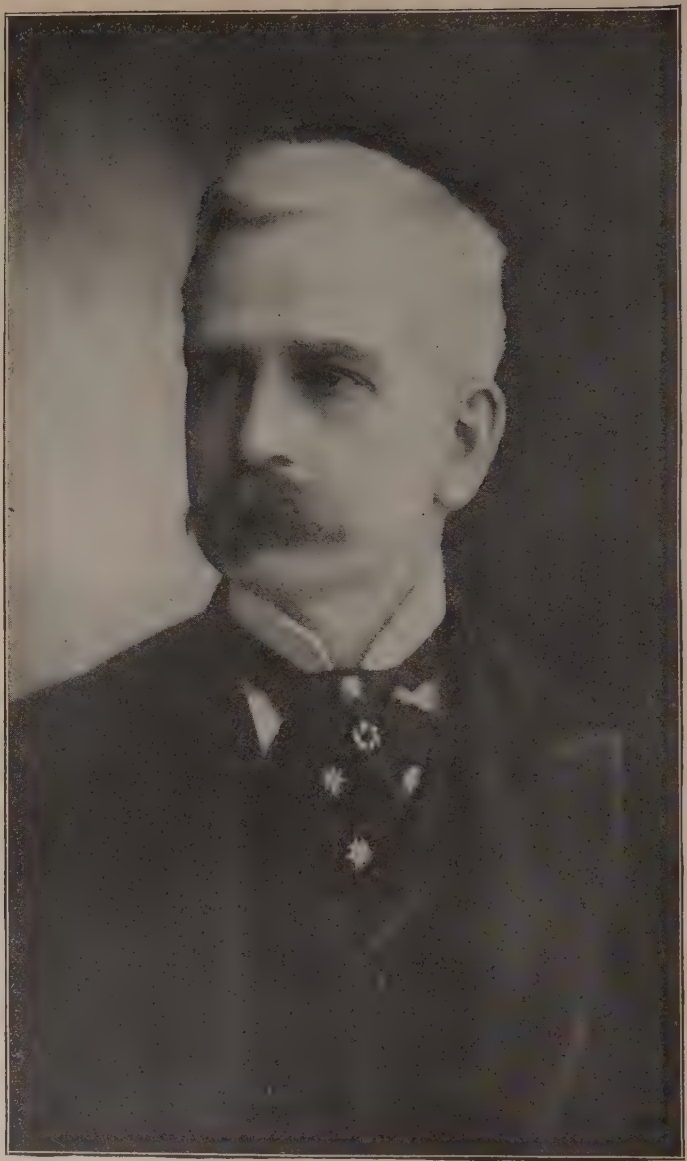
J. K. ARTHUR, President.
HARRY STONE, Secretary.

You Will Never Be Sorry:

For living a white life.
For hearing before judging.
For being candid and frank.
For thinking before speaking.
For harboring clean thoughts.
For discounting the tale-bearer.
For standing by your principles.
For stopping your ears to gossip.
For asking pardon when in error.
For being as courteous as a duke.
For the influence of high motives.
For bridling a slanderous tongue.
For being generous with an enemy.
For being square in business deals.
For sympathizing with the oppressed.
For giving an unfortunate fellow a lift.
For being patient with cranky neighbors.
For promptness in keeping your promises.
For putting the best possible construction upon the doings of others.

PART III

Contracts, Promissory Notes, Orders, Receipts, etc.



1834 **MARSHALL FIELD** 1906

Honest Thoughtful Conservative

Merchant Prince of America

Commercial and Legal Business Forms

WITH THE PRINCIPLES, RULES AND LAW GOVERNING BUSINESS TRANSACTIONS OF EVERY NATURE

CONTRACTS

A Contract is an agreement between competent persons, on sufficient consideration, to do, or abstain from doing, some certain act or acts within some certain time, expressed or implied.

To Constitute a Valid Contract—one that can be enforced by law—five things are necessary: competent parties, sufficient consideration, mutual assent, lawful subject matter, and time of performance.

Parties Who May and Who May Not Make Contracts.—Until the contrary is shown, all persons entering into a contract are presumed to be competent to bind themselves by their agreement. Hence those who would resist the performance of a contract on the ground of legal incapacity must set up and prove the particular incapacity upon which they rely to avoid the contract.

Minors, insane persons, idiots, and persons deprived of their reason by intoxicants, are incapable of entering into contracts.

A married woman, generally speaking, under the common law, is not a competent party to a contract. But by the statutes of most of the States a married woman is now empowered to enter into contracts regarding her own separate

property, enter into business on her own behalf, or join in a business partnership with her husband. In some States, however, e. g., Massachusetts, a married woman, while free to contract in most other respects, cannot contract with her husband or enter into a partnership with him.

In some states a wife cannot become security for her husband and in Pennsylvania she cannot become accommodation indorser, maker, guarantor or surety for another, nor can she execute a mortgage or deed of her separate property without her husband joining in.

Bound for Necessaries Furnished.—Though minors, insane persons, idiots, etc., are not, generally speaking, competent to enter into contracts, they are bound for necessaries furnished them. Generally speaking, a husband is bound for necessaries furnished his wife, even if against his orders, if he fails to furnish them for her, but this rule is subject to various exceptions.

Corporations can enter into contracts, provided they keep within the limits prescribed by their characters. Anything attempted beyond those limits would be ultra vires, beyond their power, and void. Parol contracts made by a corporation's authorized agents within the scope of its chartered powers are express promises of the corporation. Like an individual, a corporation may be bound by implied contracts deduced by inference from corporate acts. See Corporations.

Consideration.—A contract without consideration, if not under seal, is void at the option of the party against whom it is sought to be enforced. There is one exception to this rule. It does not apply to innocent indorsees and bona fide holders of negotiable papers. A promise is a good consideration for a promise.

It is not always necessary that the consideration be expressed in the contract; it is sometimes implied. Thus, when a contract is deliberately made, without fraud and with a full knowledge of the circumstances, any damage, suspension, or forbearance of a right, will be sufficient consideration. It is not necessary that the consideration should exist at the time of the promise, if it arise afterwards, in consequence of the promise.

Mistake.—A contract made under a mutual mistake of fact is not binding; for instance, if A. sells to B. a horse, which both A. and B. suppose to be in A.'s stable, and at the time of the contract the horse is dead, the sale is void. But a mistake of law is binding, for every one is presumed to know what the law is, though in some states there are exceptions to this rule.

Mutual Assent.—No contract is valid in law unless the parties agree to the same thing in the same sense. Where a person orders a certain quantity of goods, for instance, at a certain credit, and the merchant sends a less quantity at a shorter credit, and the party refuses to take them the merchant cannot recover the price of them; for there was no agreement on the terms, and hence no contract.

Subject Matter.—The thing to be done or omitted is called the **subject matter** of the contract. If this is **illegal** in its character, **immoral**, or **contrary to public policy**, the law will not enforce the contract.

Among Contracts Contrary to Public Policy is that of a man binding himself not to exercise his trade or business; but if, for a **valuable consideration**, he engages not to exercise his trade in a particular place, he is bound by his engagement, but he may exercise it elsewhere. A bond or agreement that the obligor shall never carry on, or be concerned in, a particular business, is void.

Wagering contracts are also generally void as against public policy, but such agreement is not void if the prohibition is restricted to a certain territory or locality.

Time of Performance.—There must be a time, either expressed or implied, in which a contract is to be performed. Otherwise one party could postpone the execution of his contract indefinitely. Where no time is expressed, a reasonable time will be understood.

Formality.—Contracts of various kinds may be made verbally, others are required by law to be in writing. All contracts are either express or implied. Express contracts are where the terms are openly stated at the time of making. Implied are such as reason and justice dictate, and which

the law presumes every man undertakes to perform. For instance, if there is no stipulation as to the price, when one sells goods, or performs labor for another at his request, the law implies a promise to pay for such goods, or labor, so much as they are reasonably worth. It is also an implied condition of work and labor, that it be done in a suitable and workmanlike manner. But the law will never imply a promise against a party's declaration at the time.

Contracts That Must be in Writing.—The English Statute of Frauds has been substantially copied in nearly all the States. It provides that—in the following cases no agreement shall be legally enforcible unless the same, or some memorandum thereof, be in writing, and subscribed by the party to be charged therewith: 1. Every special promise of an executor or administrator to answer damages out of his own estate. 2. Every agreement made upon consideration of marriage. This applies not to promises of marriage, but to promises to pay money, or to make a settlement of property, if the marriage is consummated. 3. Every agreement that by its terms is not to be performed within one year from the making thereof. 4. Every special promise to answer the debt, default, or misdoings of another. 5. Every contract for the sale of any goods, chattels, or thing for the price of ten pounds ($50.00), or more, unless: (a) the buyer shall accept and receive part of such goods; or (b) the buyer shall at the time pay some part of the purchase money, or give something in earnest to bind the bargain. 6. Every contract for the sale of any lands, or any interest in lands.

Where a person has the benefit of another's services under a verbal agreement, and then successfully pleads the statute of frauds, the other party may recover so much as his services have been worth.

Interpretation and Construction.—In construing contracts, the intention of the parties must govern; words are to be taken in their natural and obvious sense; when the intention is doubtful the context may be resorted to to explain ambiguous terms; the whole of the instrument is to be

viewed and compared in all its parts, so that every part of it may be made consistent and effectual. Where the language of an agreement is plain and unequivocal, there is no room for construction, and it must be carried into effect according to its plain meaning.

Ambiguities in deeds or other instruments are generally interpreted against the grantor, or contractor.

Performance.—A person who undertakes to perform a job of work by special contract, must perform his contract before he is entitled to his pay. If a person is hired for six months, or other definite time, and leaves before the end of it, without reasonable cause, he loses his right to wages for the period he has served, except in New Hampshire and a few other States which have followed the New Hampshire rule. But if he is dismissed without cause he can recover for the whole term—at its expiration, less what he has been able to earn since dismissal, if anything; it is his duty to seek other employment and thus reduce the amount of damages. It is no sufficient cause for abandoning one's contract, that he was put upon work not contemplated at the time the contract was made, unless his contract calls for specific kind of work, but if he is prevented by sickness from laboring during the stipulated period, he may recover for his services as much as his services were worth, for the time he labored, though there are some exceptions to this rule.

Specific Performance.—The law side of the court cannot enforce the specific performance of a contract. It can only allow damages for the failure to perform, or for breach. On the equity side of the court, certain contracts may be enforced specifically. They most commonly relate to the sale of real property.

Rescinding.—In general, a contract cannot be rescinded, unless by consent of both parties, except in case of fraud. A party having a right to rescind a contract, must exercise the right within a reasonable time.

Where parties agree to rescind a sale once made and perfected without fraud, the same formalities of delivery, etc.,

are necessary to revest the property in the original vendor, which were necessary to pass it from him to the vendee.

Tender.—A tender of payment does not bar, or extinguish the debt; for the debtor is still liable to pay it, but it bars the claim to subsequent damages, interest and costs of defense against the plaintiff. A debtor should tender the full amount of the debt with the interest and costs which have accrued.

Damages.—The general rule of law respecting the measure of damages is, that where an injury has been sustained, for which the law gives a remedy, that remedy shall be commensurate with the injury sustained.

HOW A CONTRACT SHOULD BE WRITTEN

Pen and Ink Should Be Used in writing a contract, but the use of a pencil will not render the contract invalid. The contract should be written in plain and unequivocal language, and the law does not in general require a formal contract drawn up with technical precision.

The Contract Should Be Dated, and care should be taken that the date be not a Sunday. Holidays are on a different basis from Sunday. It is said that a holiday is a privilege, not a duty, and probably contracts made on a holiday are legal, unless expressly forbidden by Statute. But in Pennsylvania and some other states a contract made and executed on Sunday will not be disturbed or annulled, and a contract made on Sunday may be ratified another day and thereby made effective. A will dated on Sunday is not invalid.

And Erasures or Interlineations made in the body of the contract should be specified in the margin or at the bottom as having been made before the contract was signed.

Any Material Alteration in the contract after it is signed, if

made by a party to the contract without the consent of the other party will discharge the contract.

Contracts should be prepared and signed in duplicate, triplicate, etc., according to the number of persons concerned in them. Each party should be furnished with a copy.

It is the presumption of the law that a person in making a contract intends to bind not only himself but his legal representatives. Such representatives may therefore sue or be sued on a contract, although not named in it.

Letters May Constitute a Contract.—If a letter containing an offer is answered by another, accepting it, the two letters taken together constitute the written contract. If an order for goods is sent and filled it is a written contract as far as the writer is concerned, but not as to the other party. A telegram in the same way may be a written contract.

General Form of Contract

CONTRACT, made and concluded this first day of June, A. D. 1904, by and between John Jones, of the city of Springfield, county of Sangamon, and State of Illinois, party of the first part, and Samuel Smith, of the same place, party of the second part, in these words: The said party of the second part contracts and agrees to and with the said party of the first part, to [*here insert what is to be done*]; and the said party of the first part contracts and agrees to pay unto the said party of the second part, for the same, the sum of fifty dollars, lawful money of the United States, as follows: the sum of twenty-five dollars when [*here state the contingency on which the first payment is to be made*], and twenty-five dollars when [*here state the other contingency*].

In witness whereof, the parties to these presents have hereunto set their hands and seals, the day and year first above written.

JOHN JONES. [SEAL]
SAMUEL SMITH. [SEAL]

Contract to Build

THIS AGREEMENT, made the tenth day of May, A. D. 1905, between John Doe, of the city of Bloomington, in the county of McLean, and State of Illinois, party of the first part, and Richard Roe, of the same place, party of the second part,

Witnesseth, that the said party of the first part, for the consideration hereinafter mentioned, agrees to erect and build for the said party of the second part, a dwelling-house on the lot of land, numbered 91 Oak street, in the city of Bloomington aforesaid, and to furnish all the materials and perform all the work necessary to complete the same agreeably to the accompanying plans and specifications signed by the parties; and to deliver the said building, finished in every respect, to the said party of the second part, on or before the .... day of ..... next.

In consideration whereof, the said party of the second part agrees to pay to the said party of first part, the sum of one thousand four hundred

dollars ($1,400.00), as follows:—$200 when the cellar is completed, $200 when the frame is erected, $200 when the outside is shingled and clapboarded $200 when the lathing is completed, and $600 when the building is finished; which sums shall be in full of all his claims and demands against the party of the second part, except as hereinafter provided.

And it is further agreed, that the said party of the second part may modify the before-mentioned specification, in any particular, without impairing its validity, or the validity of this contract in other respects;—*provided* that the sum to be allowed to either party for such alterations shall have been agreed upon by the parties hereto, and a full statement of the same made in writing, and signed by them, before the work to be affected by the change is commenced.

In witness whereof we have hereunto set our hands and seals, on the day and year first above written.

JOHN DOE. [SEAL]
RICHARD ROE. [SEAL]

Executed and delivered in presence of

.....

Contract for Hiring a Farm Hand

Know all Men by These Presents:

That Walter A. Clyde agrees to work faithfully for Wm. R. Manbeck, as a general laborer on his farm, and to do any work that he may be called upon to do in connection therewith, in the township of Lisle, County of Dupage, and State of Illinois, for the period of one year, beginning the first day of February next, 1904, for the sum of Thirty Dollars per month.

In consideration of the services to be performed, the said Wm. R. Manbeck agrees to pay Walter A. Clyde Thirty Dollars per month.

In witness whereof, the said parties have hereunto set their hands this first day of January, 1904.

WALTER A. CLYDE.
WM. R. MANBECK.

Contract with a Clerk, or Workman

THIS AGREEMENT, made this first day of January, A. D. 1904, by and between James Freeman, of the city of Chicago, county of Cook, and State of Illinois, party of the first part, and Alfred Willis, of the said city, county, and State, party of the second part,

Witnesseth, that the said Alfred Willis has agreed to enter the service of the said James Freeman as a clerk (*or Journeyman*) and promises faithfully, honestly and diligently to give and devote to him his time and labor as aforesaid, for the space of three years, from the first day of January, A. D. 1904.

In consideration whereof, the said James Freeman agrees to allow, and pay to the said Alfred Willis the sum of twelve hundred dollars ($1200.00) per annum, in equal payments of one hundred dollars on the first day of each and every calendar month of the year, the first payment to be made on the first day of February, 1904.

Witness our hands,
JAMES FREEMAN.
ALFRED WILLIS.

Contract to Cultivate Land on Shares

THIS AGREEMENT, made this first day of February, A. D. 1904, between Chas. N. Rohr, of the town of Colfax, county of Clinton, State of Indiana, and Henry Reamer, of Linden, county of Montgomery, State of Indiana, party of the second part.

Witnesseth that the said Chas. N. Rohr will, on or before the first day of March, break, properly prepare, and sow with wheat the forty acres belonging to, and lying north of the dwelling-place of the said Henry Reamer, in the town of Linden.

That one-half of the seed wheat shall be found by said Henry Reamer. That when said crop is in proper condition the said Chas. N. Rohr will cut, harvest, and safely house it in the barn of Henry Reamer. That he will properly thresh and clean the same. That he will deliver one-half of said wheat to the said Henry Reamer at his granary, on or before the fifteenth day of November, 1904.

Witness our hands and seals.

CHAS. N. ROHR. [SEAL]
HENRY REAMER. [SEAL]

Signed, sealed, and delivered in presence of
WM. MYERS,
FRED HILLMAN.

FACTS AND FORMS OF PROMISSORY NOTES.

A Negotiable Note is a positive promise in writing to pay to a person therein named or his order or to him or bearer a certain sum of money, at a specified date, or within a time that is certainly ascertainable.

A Note Promising to Pay "At Sight" or "On Demand" is negotiable, for it is presumed that the party interested will see that sight is given or demand made.

If No Time of Payment Is Specified, "on demand" will be presumed to be intended.

Parties to a Note.—The person who promises is called the maker, and the one to whom the promise is made is called the payee. One who transfers a note to another by indorsing his name on the back is called an indorser, and the person to whom the note is transferred is called the holder.

Negotiation.—A note is negotiated when it is transferred from one person to another in such manner as to constitute the transferee the holder thereof; if payable to bearer it is

negotiated by delivery; if payable to order it is negotiated by the indorsement of the holder, completed by delivery.

Transfer after Maturity.—A note may be transferred as well after maturity and in the same manner as before maturity, but the purchaser takes it at his own risk. It is subject in his hands to any defenses that may have existed against it in the hands of one holding it when it became due.

Holders in Good Faith.—A purchaser or holder of a note or other negotiable instrument who has acquired it in good faith, for a valuable consideration, in the ordinary course of business, when it is not overdue, without notice of dishonor, and without notice of facts which impeach its validity, has a title unaffected by those facts, and may recover on the instrument, even though it was without consideration between the parties originally, was subsequently released or paid, or was originally obtained by fraud, theft or robbery; but

In Case of Fraud, Theft or Robbery, if the instrument had never been given force by the maker by delivery and he was not guilty of negligence, there could be no recovery; in such case the note would never have had any legal existence. But the slightest negligence renders the maker liable, for instance, if the maker of a note after completing it retains it in his possession, no matter how securely, he is, according to some authorities, others contra, liable to a holder in good faith, or, as he is commonly termed, a bona fide holder, although it was placed in circulation through fraud, theft or robbery.

Where a Holder in Good Faith Is Not Protected.—The defenses against which a bona fide holder is not protected are: 1. Incapacity of the maker of a note to contract; as where he is an infant, or a lunatic, or a person under guardianship. 2. The interdiction of a statute; as where a statute renders the contract void, for gambling or other illegality. 3. Where the party has never in fact signed the note as it stands; as where it was forged, or where it was subsequently altered, without the maker's consent or fault. 4. Where the maker was misled into signing something he was

not intending, through imposition, and without negligence on his part, or where a person who is unable to read, or is blind, has a note falsely read to him, and he signs it believing it to have been correctly read, he will be protected. But where a person of ordinary faculties and knowledge is betrayed into signing a note, believing it an instrument of a different kind, he will be bound to bona fide holders, unless he has been free from negligence. If the maker with reasonable caution might have detected the fraud, the note will be good with a bona fide holder.

A Note Executed Under Duress—that is, under such fear or compulsion as to overcome the free agency of a reasonably firm man—will not be good in the hands of a bona fide holder; for there was no consent and no fault of the maker. In some states the rule is otherwise.

Uncompleted Notes.—If a note is executed and delivered with the amount left blank, the parties who sign or indorse it will be bound to a bona fide holder for any amount that may be filled in.

If a Party Entrusts His Signature on a Blank Paper to another to fill in some note, he will be bound to a bona fide holder though the other fills in an entirely different note than agreed. But if a person writes his name on a blank paper without any intention of having it filled out, and another obtains it and writes a note above the name, it will not be binding even in the hands of a holder in good faith.

Liability of Indorsers.—All the persons who have indorsed a note are liable for the amount due; but only one satisfaction can be recovered. If one indorser is obliged to pay the debt he can generally look to the other person or endorser for their proportion.

An Indorser May Avoid Liability by writing "without recourse" on the back of the note with his signature.

To Make the Indorser of a Note Responsible, the note must be presented and payment demanded of the maker on the day it becomes due.

Protest.—A protest of a note is a formal statement by a notary that the note was presented for payment and payment refused. When a note is not duly paid on presentation,

it is said to be "dishonored" and is taken to a notary public, who again presents it, if not paid, he notes its non-payment, and afterwards draws out a formal protest, that legal proceedings may be taken for recovering the amount due.

Protest is unnecessary, the certificate of the notary being merely prima facie evidence of dishonor. Notice of dishonor, however, should be given all the endorsers. The rules as to notice vary in different states.

Notice of Protest.—The holder of a note may give notice of protest either to all the previous indorsers or only to one of them; in the latter case he must select the last indorser, and the last must give notice to the last before him, and so on.

Where notice of protest is duly addressed and deposited in the post office the sender is deemed to have given due notice notwithstanding any miscarriage in the mails. Rules as to endorsers' notice vary in different states.

Demand and Payment.—Notes payable on demand must be presented for payment within a reasonable time, in order to hold indorsers.

Where Days of Grace are Allowed by statute on notes, they are not considered due until the expiration of the days of grace. If a note is presented and payment demanded on the last day of grace, and payment refused, the maker is in default, and notice of dishonor may forthwith be given to the indorser. For days of grace allowed by the statutes of different States, see Interest Laws and Statutes of Limitation.

A Note Made Payable at a Bank and held there for payment until the usual hour for closing, need not be presented to the maker in person to bind the indorser. It may be protested, as in the case of drafts, immediately on the close of bank hours. Payment must be immediately demanded of the indorser if he resides in the same place; if he is a non-resident he must be notified at once by letter. Laws as to notice vary in different states.

Presentment Not Necessary to Render Maker Liable.—Presentment for payment is not required in order to charge the maker of a note.

Sundays and Holidays.—When the day of maturity falls

upon Sunday or a legal holiday the note is payable on the next succeeding business day if no days of grace are allowed. But in case days of grace are allowed and the last day of grace falls on Sunday or a holiday, the note is payable on the next preceding day.

Place of Demand.—Where place of payment is specified in a note demand should be duly made at that place.

By Whom Demand May Be Made.—The holder of a note or any one acting for him may make the demand for payment and send notice of dishonor to the indorsers. Usually the holder or his agent notifies all the parties on the note. This is the most business-like, as well as the most prudent way, as it renders all parties responsible to him, and each responsible to each other in their order.

Extending Time of Payment by the holder releases the indorsers of the note, unless consent to such extension has been given by the indorsers.

Lost Notes.—If the maker should refuse to pay a note which has been lost, he may by law be compelled to pay it, but it would be necessary for the party collecting it to give bond to protect the maker from all further claims, on account of the lost paper. But in some states if the note was lost after maturity and without endorsement no bond is required.

Proof Required.—It is necessary to prove that the note has been given by a certain party or parties. If the defendant claims that the note has been paid the burden of proof is on him to prove that. The production of the note by the plaintiff gives rise to the presumption that it has not been paid.

The Finder of a Note, as of all other property, must make reasonable efforts to find the owner, before he is entitled to appropriate it for his own purposes. If the finder conceal it, he is liable to the charge of larceny or theft.

A Note Destroyed by Fire can be collected by proof of loss.

Interest.—A note which does not state on its face that it bears interest, will bear interest only from maturity.

If the Words "With Interest" are Included in a Note it draws the legal rate of interest from the date of making it.

If the Note is to Draw a Rate of Interest Higher than the Legal, but not higher than the statute of the State allows, the rate of interest must be specified.

Death of a Holder.—After the death of a holder of a negotiable note, his executor or administrator may transfer it by his indorsement.

When Right of Action Expires.—The statute of limitations begins to run from the day the right of action accrues. See Interest Laws and Statutes of Limitation.

DIFFERENT FORMS OF NOTES

Form of Non-negotiable Note

$100.00 Boston, Mass., March 24, 1906.

Thirty days after date I promise to pay John Jones One Hundred Dollars, value received.

JOHN DOBSON.

Negotiable Without Indorsement

$100.00 Madison, Wis., Jan. 2, 1906.

Sixty days after date I promise to pay John M. Smith or bearer, One Hundred Dollars, value received.

GRANT WHITE.

Negotiable by Indorsement

$100.00 Poultney, Va., Mar. 31, 1906.

Ninety days after date I promise to pay to George Nelson or order, One Hundred Dollars, value received.

RICHARD MILLS.

Payable at Bank

$100.00 Chicago, Ill., May 2, 1906.

One year after date, for value received, I promise to pay Oliver Brown or order, at the First National Bank, One Hundred Dollars, with interest at six per cent per annum.

CHARLES JOHNSON.

On Demand

$50.00 Denver, Colo., January 2, 1906.

On demand, for value received, I promise to pay to the order of John Riley, Fifty Dollars, with interest.

EDWARD JAMES.

Accommodation Note

[N. B.—The maker of an accommodation note (one for which he has received no consideration, having lent his name or credit for the accommodation of the holder) is not bound to the person accommodated, but is bound to all other bona fide holders, precisely as if there was a good consideration.]

$100.00 Toledo, O., March 10, 1906.

Sixty days after date I promise to pay to the order of Almer Wilson, One Hundred Dollars, at the First National Bank, without defalcation.

Credit the drawer, OWEN YATES.
ALMER WILSON.

To One's Own Order

$100.00 Memphis, Tenn., April 3, 1906.

Sixty days after date I promise to pay to my own order, One Hundred Dollars, value received. Interest at seven per cent.

MARION ADAMS.

By Married Woman

$200.00 Rochester, N. Y., Nov. 9, 1906.

For value received, I promise to pay John Jackson, or order, ninety days after date, Two Hundred Dollars, with interest. And I hereby charge my individual property and estate with the payment of this note.

(Mrs.) MARY H. JONES.

By Person who Cannot Write

$50.00 Corry, Pa., Oct. 8, 1906.

For value received, I promise to pay to the order of William Warren, Fifty Dollars, with interest at six per cent.

his
EDWIN MORRIS, Witness LOUIS X BARBER.
mark.

Payable in Merchandise

$100.00 Springfield, Mass., May 3, 1906.

For value received, I promise to pay Daniel Ward, or order, One Hundred Dollars in merchantable wheat, at the current price.

JASPER NOYES.

Collateral Note

$300.00 Three Oaks, Mich., Aug. 1, 1906.

Sixty days after date I promise to pay to the order of John Jacobson, Three Hundred Dollars, without defalcation, for value received. Interest at six per cent.

Having deposited United States Bonds of the nominal value of Four Hundred Dollars, which I authorize the holder of this Note, upon the non-performance of this promise at maturity, to sell, either at public or private sale, without demanding payment of this Note or the debt due thereon, and without further notice, and apply proceeds, or as much thereof as may be necessary to the payment of this note, and all necessary expenses and charges, holding myself responsible for any deficiency.

MARTIN FIELD.

Pennsylvania Judgment Note

$..... 190

.....after date,.....promise to

Pay to the order of.....

..... Dollars.

100

without defalcation, value received, with interest.

And further,.....do hereby authorize and empower any Attorney of any Court of Record of Pennsylvania, or elsewhere, to appear for and to enter Judgment against.....for the above sum, with or without declaration, with costs of suit, release of errors, without stay of execution, and with.....per cent. added for collecting fees; and.....also waive the right of inquisition on any real estate that may be levied upon to collect this note, and do hereby voluntarily condemn the same, and authorize the Prothonotary to enter upon the *fi. fa*.....said voluntary condemnation, and.....further agree that said estate may be sold on a *fi. fa.*, and.....hereby waive and release all relief from any and all appraisement, stay or exemption laws of any State, now in force, or hereafter to be passed.

Witness,

....[L. S.]

....[L. S.]

Joint Note

$200.00 Cairo, Ill., March 30, 1906.

Two months after date, we promise to pay to the order of Albert Sloan Two Hundred Dollars, value received.

JACOB SCOTT,
JAMES ATKINS.

Joint-and-Several Note

$500.00 Newark, N. J., March 6, 1906.

Six months after date, for value received, we jointly and severally promise to pay Hiram Davids or order, at the First National Bank, Five Hundred Dollars, with interest.

RICHARD MARK,
JAMES HACKETT.

$200.00 Concord, N. H. Nov. 1, ——

On demand, we jointly promise to pay Thomas Seymour, or order —— Two Hundred 00/100 —— Dollars —— Value received; with interest at five per cent. until paid.

George Downey.
Charles Snow.

Example of How This Note Should Be Written.

INDORSEMENTS OF NOTES

Definition.—An indorsement is a writing on the back of a note or other written instrument.

What is Sufficient.—Though it is usual and better to write the indorsement in ink on the back of a note, it is legally sufficient if written with either pen or pencil upon any part of the instrument, or upon a paper attached thereto. The signature of the indorser, without additional words, is a sufficient indorsement.

Kinds of Indorsements.—An indorsement may be either *special* or *in blank*, and it may also be either *restrictive, qualified*, or *conditional.*

An Indorsement in Blank specifies no indorsee, and an instrument so indorsed is payable to bearer, and may be negotiated by delivery. (See Form 1.)

A Special Indorsement (sometimes called a *full* indorsement) specifies the person to whom or to whose order the instrument is to be payable; and the indorsement of such indorsee is necessary to the further negotiation of the instrument. (See Form 2.)

A Qualified Indorsement constitutes the indorser a mere assignor of the title to the instrument. It may be made by adding to the indorser's signature the words "without recourse," or any words of similar import. Such indorsement does not impair the negotiable character of the instrument. (See Form 3.)

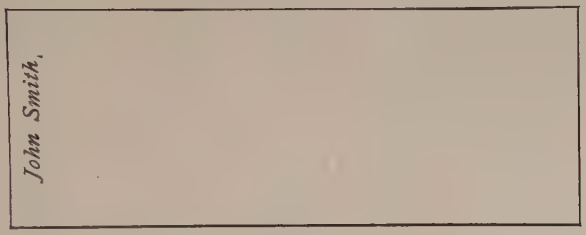
A Conditional Indorsement is one that involves some condition. A party required to pay the instrument may disregard the condition, and make payment to the indorsee or his transferee, whether the condition has been fulfilled or not. But any person to whom an instrument so indorsed is negotiated will hold the same, or the proceeds thereof, subject to the rights of the person indorsing conditionally. (See Form 4.)

A Restrictive Indorsement expressly confines the payment to some particular person or purpose. (See Form 5.)

Partial Payments.—When money is received on a note, the amount and date of receiving should be plainly written on the back of the paper. (See Form 6.)

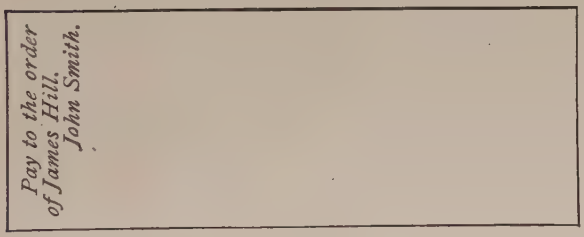
FORMS OF INDORSEMENTS

Indorsement in Blank



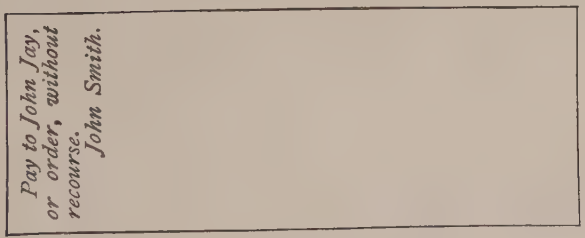
FORM 1

Special Indorsement



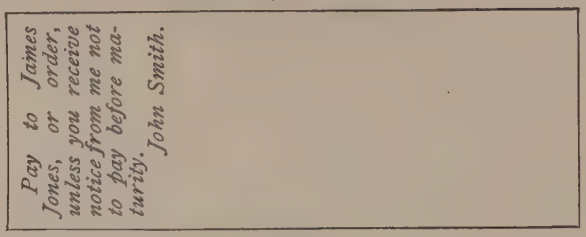
FORM 2

Qualified Indorsement



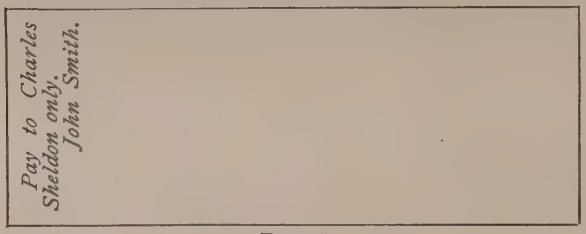
FORM 3

Conditional Indorsement



FORM 4

Restrictive Indorsement



FORM 5

Partial Payment Indorsement

FORM 6

An Order is a written request or direction for the payment of money or delivery of goods to a person therein named, the same to be charged to the person making the request.

Orders for the payment of money are negotiable if made payable to order or to bearer, but the person on whom they are drawn is not under obligation to pay them, unless they have been accepted, for an order partakes of the nature of a draft.

FORMS OF ORDERS

For Money

$500.00 Chicago, Ill., March 10, 1904.

Mr. Richard Foss: Please pay to William Mason, or bearer, Five Hundred Dollars, on my account. Thomas Fell.

For goods to Value of Certain Amount

$100.00 Columbus, O., April 1, 1904.

Messrs. Bronson, King & Co.: Please deliver to the bearer, David Swing, such goods as he may desire, to the value of One Hundred Dollars, and charge same to my account. George H. Thomas.

For Goods Stored

Richmond, Va., Sept. 1, 1904.

Messrs. Smith, Jones & Co.: Please deliver to the bearer, E. H. Van Oven, Six Barrels of Apples, stored by me in your warehouse.

J. L. Spalding.

DUE BILLS

A Due Bill is a formal written acknowledgment that a certain amount is due to the person therein named. It may be payable in money or in merchandise. It is not transferable, and draws no interest unless specified therein.

FORMS OF DUE BILLS

Payable in Money

$50.00 Racine, Wis., July 2, 1904.

Due William Macey, on demand, Fifty Dollars, value received.

John Knox.

Payable in Merchandise

$100.00 Indianapolis, Ind., Sept. 2, 1904.

Due Charles H. Adams, for services rendered, One Hundred Dollars, payable on demand, in merchandise, at my store.

William Johnson.

RECEIPTS

RULES FOR WRITING ALL KINDS OF RECEIPTS

What a Receipt Is.—A receipt is an acknowledgment in writing, signed by the person receiving, that certain personal property (money or goods, or both), has been received.

A Complete Receipt requires the following statements: That a payment has been received; the date of the payment; the

amount or article received; from whom received, and if for another on whose behalf payment is made; to what debt or purpose it is to be applied; by whom received, and if for another, on whose behalf it was received.

Kinds of Receipts.—Receipts are divided generally into three kinds: *Receipts in Full, Receipts on Account*, and *Receipts to Apply on Particular Accounts.*

Every Receipt Should Show whether payment is made in full, on account, or on what particular account where there are more than one between the persons.

How an Agent Should Sign.—An agent should sign his principal's name and then write his own name underneath, prefixing the word "by," thus:

John Smith, [principal]
by Thomas Jones, [the agent.]

Receipt for a Note Not Necessary.—It is not necessary to take or give a receipt when a note is paid, as the instrument itself becomes a receipt.

Mistake or Fraud.—A receipt given under error or mistake of fact, or obtained through fraud, is void.

FORMS OF RECEIPTS

Receipt in Full

Clinton, Ill., March 10, 1904.

Received from Randolph Pike, Two Hundred and Fifty-three Dollars, in Full of All Demands.

CHARLES JOHNSON.

Receipt on Account

Davenport, Iowa, July 1, 1904.

Received from Hiram Powers, One Hundred and Seventy-five Dollars, on account.

CLARENCE WHITE.

Receipt on Particular Account

Carson City, Nev., Aug. 1, 1904.

Received from Abner Oglesby, One Hundred and Ninety-five Dollars, to apply on hire of horse.

MARSHALL STRAIT.

Receipt for Rent

Ottumwa, Iowa, May 1, 1904.

Received of William Lawrence, Thirty Dollars, in full for rent of residence at 96 Adams Street for the month of May.

JAMES WALTERS,
Per WILLIAM STOUT, Agent.

$96.00/100 San Francisco, July 9, ——.

Received of Harold Primrose ——

Ninety-six 00/100 —— Dollars

In full of all demands

W. G. Hill.

Example of How a Receipt "in Full" Should Be Written

In writing any receipt or note write the amount of same on a separate line following the name of the person to whom the receipt or note is given.

Receipt for Money Advanced on Contract

$1500 St. Louis, Mo., June 14, 1904.

Received from Wm. Rickert Fifteen Hundred Dollars in advance, on a contract to build for him a brick house at No. 2244 Sherman Street, St. Louis.

JAMES R. STEELE.

Receipt for Purchase of a Horse

$150.00 Rochester, N. Y., Oct. 1, 1904.

Received from John Meyer One Hundred and Fifty Dollars for one gray mare, guaranteed to be only four years old, gentle, quiet to ride or drive.

F. M. SCHULTZ.

Receipt for Interest

St. Paul, Minn., Sept. 9, 1904.

Received from James E. Harter One Hundred and Twenty Dollars, for interest to Sept. 1, 1904, on his Bond and Mortgage; receipt to be acknowledged also on the bond.

A. L. MERTON,

Rate, 7%. Time, —— Months, —— Days. Executor.

Receipt for Property

Elmira, N. Y., Nov. 10, 1904.

Received from W. L. Peterson the following enumerated articles to be held in trust for him and returned on his demand: One Bicycle, one Gold Ring, and one Rifle.

EDWARD PARKS.

Receipt for Money Paid on Lost Note

$1,000.00 Lincoln, Neb., April 20, 1904.

Received of Charles J. Morrison one thousand dollars, in full payment for a certain note given by said Chas. J. Morrison, dated October 15, 1903, calling for one thousand dollars; which said note is lost, destroyed, or mislaid, and this receipt is a guarantee against future demands on account of said note.

SAMUEL W. GOSS.

N. B.—Better never lose a note.

Warehouse Receipt

(For form of warehouse receipt and a statement of the law regarding them see title WAREHOUSING.)

PART IV

Banks, Banking, Interest Laws, Legal Holidays, etc.

1808 **BARON ROTHSCHILD** 1879

The First Jew Who Sat in Parliament

Financier, Banker, World's Money Lender

BANKS AND BANKING

Brief History of Banks.—The name "bank" is derived from the Italian word *banco*, a bench; the early Italian banks being in the habit of transacting their business on benches or tables in the market-places of the principal towns.

The First Banking Institution of Importance was the Bank of Venice, which was established in 1171. The Bank of Genoa was projected in 1345, but did not go into full operation until 1407. The Bank of Barcelona was established in 1401, and was the first to institute the system of negotiation of bills of exchange. The

Bank of Hamburg was established in 1619, the Bank of Rotterdam in 1635, the Bank of Stockholm in 1688, the Bank of England in 1694, the Banks of Berlin and Breslau in 1765, and the Bank of North America (by Robert Morris, at Philadelphia) in 1782.

The National Banking System of the United States was organiezd in 1863, prior to which all banks of issue and deposit were chartered by the several States, and in 1857, 1,400 of these State institutions were in existence.

Different Classes of Banks.—Banks are divided generally into five classes: of deposit, of discount, of circulation, of exchange, and savings banks. Taking them separately, they may be characterized as follows:

Banks of Deposit receive money to keep for the depositor until he draws it out, by checks payable to himself or to others. A person who desires to make a single deposit, to be withdrawn in the same amount, receives from the bank a *certificate of deposit.* This is payable at any stated time or on demand, and may bear interest.

Banks of Discount are occupied in discounting promissory notes and bills of exchange, or in lending money on security. Almost all banks have a department embracing these features.

Banks of Circulation issue bills or notes of their own, intended to be the circulating currency or medium of exchange, instead of gold and silver. The notes or bills of the National Banks are guaranteed by the Government, which holds as security bonds belonging to the bank to a still larger amount than their issue of bills, or, as commonly termed, their "circulation." The Government also retains a five per cent fund for immediate redemption.

Only the National Banks issue a circulation, because a tax of ten per cent would be levied upon any kind of circulating notes other than those issued by the Government.

Banks of Exchange receive money on deposit, and, instead of paying it back to the depositors, make payments by drafts on other banks. They keep money on deposit at the principal trade centers, thus money can be sent to different points at small expense and without risk. They charge one who desires to remit, a small amount for their services, and sell him their draft on the place to which the remittance is to be sent.

Savings Banks receive in trust or on deposit small sums of money at a moderate rate of interest. These sums generally are

the savings of laborers from their earnings, and are thus deposited for profit and safe keeping.

At the end of a certain fixed time the interest due is added to each depositor's account. These interest terms vary with different banks, being one, three, or six months.

Each depositor is furnished with a book showing his deposits from time to time and what he has drawn out. When settling, the depositor is allowed no interest on the last deposit if it has not been in the bank for a full interest term.

NATIONAL BANKS

Why So Called.—In 1863 a national law was passed in accordance with which banks might be organized and conducted alike throughout the country. Banks formed under that and subsequent laws of Congress are called National Banks, for the reason that they are organized under national laws and their notes secured by national obligations.

How Organized.—Any number of persons, not less than five, can enter into articles of association for the formation of a national bank. Such articles must specify in general terms the object for which the association is formed, and are signed by those associating and forwarded to the Comptroller of the Currency.

Requisite Amount of Capital.—The capital stock of a national banking association is divided into shares of $100 each, and in cities of 50,000 population or over, no association can be organized with a less capital than $200,000. In cities and towns of 6,000 population, and up to 50,000, a capital of $100,000 is required; in towns of from 3,000 up to 6,000, $50,000; and in towns not exceeding 3,000, $25,000.

Shares of the Bank Stock.—The capital stock is divided into shares of $100, and is transferable on the books of the association.

Payment of Stock.—At least 50 per cent of the capital stock must be paid in before business can be commenced, and the balance at the rate of at least 10 per cent a month.

Directors must not be less than five in number. Every director must own at least ten shares of the capital stock.

Deposit of Bonds.—Every association before it can circulate notes, must transfer and deliver to the Treasurer of the United States any interest-bearing United States registered bonds, to an amount, not less than $30,000, and not less than one-third of the

capital stock paid in. These bonds are kept on deposit by the United States Treasurer.

Bank Officers and Employees.—The stockholders of an incorporated bank elect a Board of Directors, who manage its affairs. These elect a President, one or more Vice-presidents and a Cashier. The Cashier is the executive officer of the bank and its interior management. He is assisted by a number of employees. The principal ones are the Paying Teller, and the Receiving Teller, who are at the head of the debit and credit departments; the Note Teller, the Discount Clerk, the Collection Clerk, the Bookkeepers, each in charge of certain ledgers; Assistant Tellers, Assistant Bookkeepers, Check Clerks, and Messengers.

Safety of Currency and Deposits.—Owing to the fact that a National Bank can issue notes only to an amount equal to the par value of Government bonds which the bank has deposited in the United States Treasury to secure their payment, it is impossible for the holder of national bank notes to suffer loss by reason of the bank's suspension or failure.

To insure the safety of deposits in National Banks, the law provides for a rigid system of periodic inspection by bank examiners appointed by the Comptroller of the Currency. But no perfect system has yet been devised that will effectually guard against the dishonesty of managing officers of the banks. Sometimes several banks are presided over by the same individual, and when an examination of one of the banks is to be made, he may cause funds from the other banks of which he is president to be transferred to the bank which is under examination, in sufficient amount to cover up any existing deficiencies. In this way the fact that funds of the bank have been embezzled by the bank officers, or diverted into the channels of speculation, remains undetected. In most cases the opportunity for the embezzlement or diversion arises from the inefficiency or negligence of the bank directors, and in nearly every instance where loss to depositors has occurred it might have been prevented had the directors given ordinary attention to their duties.

Banking Business.—The business of banking consists in dealing in money and credit. The following are some of the branches of this business: Collection, Discount, Deposits, Circulation, Exchange, Loans, Remittance, Investment and Agency. Some of these branches have already been considered under the sub-heading Different Classes of Banks.

Collection is the opposite of remittance. Banks receive drafts or checks payable at distant points. These are presented at the places of payment. There are left with the banks, for collection previous to maturity, notes, time drafts, and bills of exchange.

Discount is paying to a person the proceeds of a note or other paper not yet due, deducting from it the interest till maturity. As the sum received is not the full amount of the paper, the borrower really pays more than the nominal rate of interest. See *Bank Discount.*

Loans.—Bankers receive money not only for safe keeping, but they loan out the greater part of it at a higher interest than they pay their depositors. Loaning money is as much a part of their business as the receiving of deposits.

Investments.—With money not otherwise employed banks purchase various securities, both for the income to be derived from them and for the profit to be realized from their sale. The chief object of a savings bank is the collective investment of small sums.

Agency.—Many banks act as financial agents for their customers, investing their money in various ways.

Clearing Houses

The magnitude of the business of exchanges makes it necessary in large cities, where there are many banks, to have an establishment known as the *clearing house*, to which each bank connected with it sends every day in order to have its business with the other banks adjusted. Each bank in its daily dealings receives many bills of other banks, and checks drawn on them, so that at the close of the day's business every bank has in its drawers various sums due to it by other banks. It is, in like manner, the debtor of other banks which have received its bills and checks. These sums due by and to the banks among themselves are at the clearing house set off against each other and the balances paid or received.

A Bank Account

Importance of Keeping.—The keeping of a bank account is a matter of great convenience as well as pecuniary benefit to business men and women. Where considerable business is done, money is constantly accumulating, which, when deposited in a reliable bank, is more secure from burglary than elsewhere. Sometimes money may be lost through robbery or failure of a bank, but of all losses to which business men may be exposed that by failure of banks is the least.

How to Open.—One wishing to open an account with a bank should have some one who is acquainted with the bank officials give him an introduction at the bank. If the bank cashier is satisfied that all is right, he will have the prospective depositor write his name in the "Signature Book," so it will be recognized by the bank officials when appearing on checks signed by the depositor He is then given a deposit ticket, and proceeds to make his first deposit.

The Deposit Ticket

The **Deposit Ticket** is a blank form which the customer fills out so as to show the date, the amount and kinds of funds deposited.

DEPOSIT TICKET

Deposited in First National Bank
By Wm. King
Chicago, Feb. 1, 1904.

Currency	$700 50
Checks, Chas. Howard	75 00
Jas. Milton	30 50
	$806 00

The Pass Book

If money is deposited in a bank to remain there for an indefinite time, the depositor receives a certificate of deposit, but if he wishes to draw out frequently the banker furnishes him a pass book in which are entered the date and the amount of deposits. The opposite page shows the amount drawn out. From time to time they are balanced, showing the amount of deposit there is in the bank.

Dr. First National Bank in account with Wm. King Cr.

1904			1904		
Feb. 1 ..	To cash ...	$ 900 00	Feb. 12,...	By check..	$ 250 00
" 15..	"	700 00	" 18....		300 00
" 20..	"	450 00	" 25....		450 00
March 2..	"	200 00	March 2....		500 00
				Balance...	750 00
		$2,250 00			$2,250 00
March 2..	To balance	$ 750 00			

The Check Book

The Check Book contains the blank orders or checks, with a margin on which to write date, amount and to whom the check is given. When filled out the check is taken to the bank, while the memorandum remains in the book.

No. 1. *Date, Feb. 12, 1904.* *Favor of John Jones* *for Merchandise.* *$250.000*	*No. 1.* *Chicago, Feb. 12, 1904.* *FIRST NATIONAL BANK* *Pay to John Jones, or order, Two Hundred and Fifty $\frac{00}{100}$ Dollars.* *$250.00* *Wm. King.*

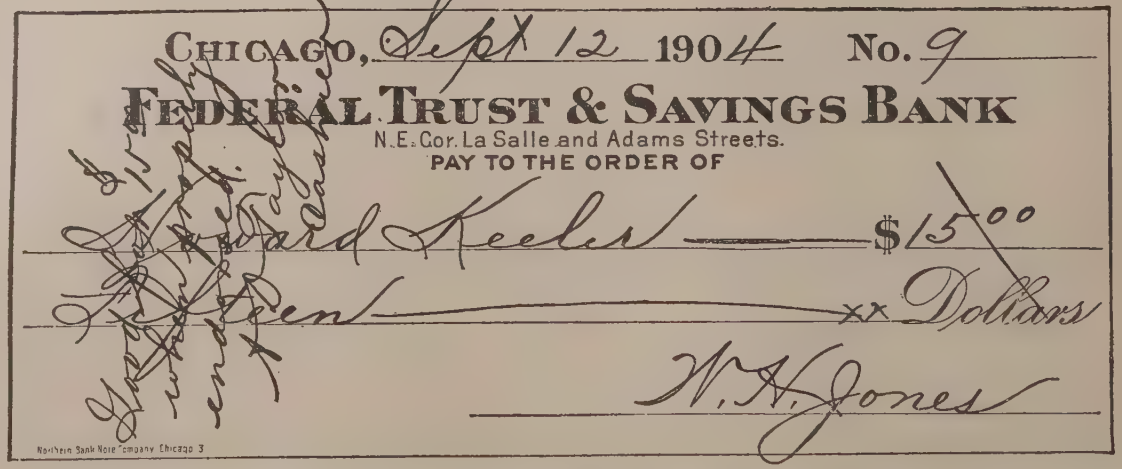
Checks

A Written Order on the Bank directing a certain amount of money to be paid to a person named, or to his order, or to him "or bearer," or simpy to "bearer," is called a check. This is the simplest form of negotiable paper. A check requires no set form of wording; any properly dated demand upon a bank, by a depositor, correctly signed, is a check and will draw the money.

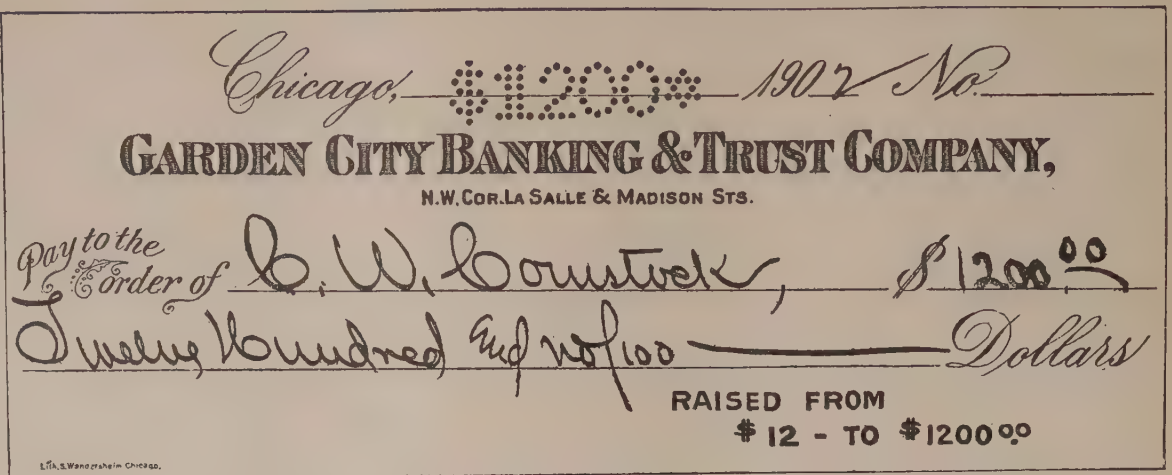
When Negotiable.—A check made payable to "bearer" is negotiable, and is payable to any one presenting it, and so is a check that is made payable to some one "or his order," after the payee has written his name upon the back.

Forged Checks.—Some forgers can imitate a signature so closely that even the one whose name is forged is not able to distinguish it from his own, and can only swear that he did not make out the check. The responsibility of detecting the forgery is thrown upon the teller. The bank pays every check at its own risk. The person whose name has been forged is not to rectify the forgery, because that would be shielding and encouraging crime.

Raised Checks.—To alter the writing and the figures of a check so that it will call for more money than the drawer gave instructions to pay is called *raising the check.* To prevent this, care should be taken to always fill in the empty spaces with lines. Use words instead of figures. If a raised check is paid by the bank, it can only charge the depositor with the amount for which he himself made out the check, unless he was grossly negligent in giving the amount to be paid. The drawer must take reasonable precaution to protect his check from being raised.

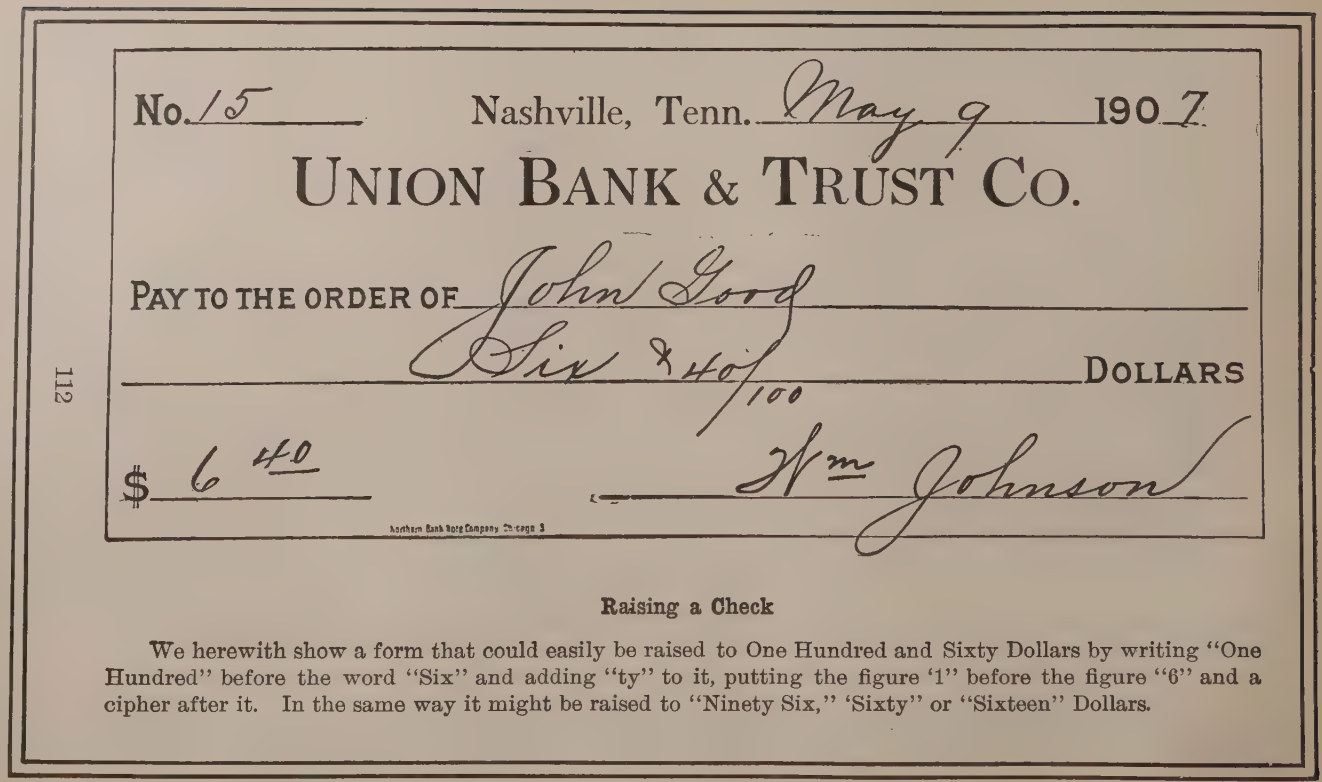


Certified Checks.—Certifying means that the person drawing the money has funds to the amount mentioned to his credit in the bank, and the bank guarantees its payment. The bank officer writes across the face "Certified," also the date and his signature; or the words "Good, when properly indorsed," and his signature.


Chicago, $1200 1902 No.
GARDEN CITY BANKING & TRUST COMPANY,
N.W. COR. LA SALLE & MADISON STS.
Pay to the Order of C. W. Comstock, $1200 00
Twelve Hundred and no/100 Dollars
RAISED FROM
$12 - TO $1200 00
Lith. S. Wandrahelm Chicago.

FACSIMILE OF CHECK RAISED FROM $12.00 TO $1200.00.

Geo. H. Kerstead, of Toronto, was charged in July, 1905, with raising a check from $12.00 to $1200.00. He wrote the word "Hundred" after the "Twelve" and added two ciphers to the figures. The bank paid him twelve $100 bills.



No. 15 Nashville, Tenn. May 9 1907

UNION BANK & TRUST CO.

PAY TO THE ORDER OF John Good

Six 40/100 DOLLARS

$ 6 40 Wm Johnson

Northern Bank Note Company, Chicago

112

Raising a Check

We herewith show a form that could easily be raised to One Hundred and Sixty Dollars by writing "One Hundred" before the word "Six" and adding "ty" to it, putting the figure '1" before the figure "6" and a cipher after it. In the same way it might be raised to "Ninety Six," 'Sixty" or "Sixteen" Dollars.

CHICAGO, Jany 10 1904 No. 446

FEDERAL TRUST & SAVINGS BANK

N.E. Cor. La Salle and Adams Streets.

PAY TO THE ORDER OF

W. J. Orr $100 40/100 Dollars

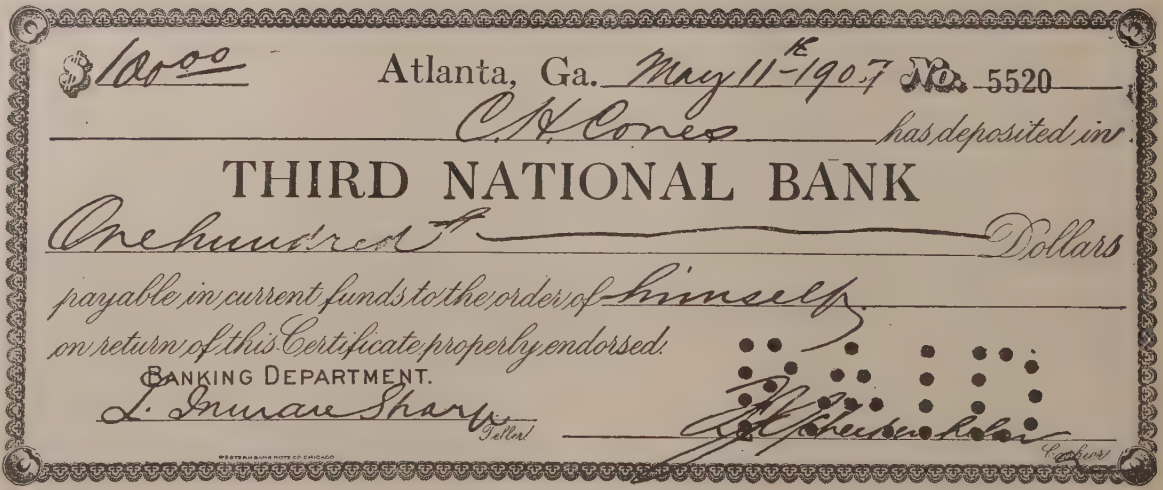
Thos. Walton

Northern Bank Note Company Chicago 3.

Check Payable to "The Order of"

This is the safest form of check. A check payable to "Bearer" can be cashed by any one.

A check payable to "John ——, or order," may have the word *order* struck out and "bearer" written instead. To write a check properly, begin close to the left-hand end to write the amount, filling what space may be left on the line with the amount of the cents if any, and a stroke of the pen. The amount in figures should be written close to the dollar sign.



$100.00 Atlanta, Ga. May 11th 1907 No. 5520

C. H. Cones has deposited in

THIRD NATIONAL BANK

One hundred Dollars

payable in current funds to the order of himself

on return of this Certificate properly endorsed.

BANKING DEPARTMENT.

L. Inman Shark Teller

E. H. Cheshire Cashier

Certificate of Deposit

Certificates of deposit are given by banks for money deposited with them for a short time when the depositor has no regular account at the bank.

They may be endorsed and used as checks.

When strangers receive certificates of deposit the bank usually requires them to leave their signatures in order to insure payment to the proper persons, when the certificates are returned.

Always Keep the Stub of Your Check Book, and in issuing a check always fill the stub out first.

In Presenting a Check to the Bank for payment, always write your name on the back before handing it in.

Giving a Check is No Payment of an indebtedness unless the check is paid.

The Death of the Maker of a check before presentment to the bank renders the check null and void, but in some States the statute provides that a check may be paid by the bank within a limited time after the death of the maker.

Payment of a Check may be Stopped by subsequent order to bank by maker before presentment of check.

When Sending a Check Away from your own town or locality always have it certified, as this renders it easier for the person to whom you send it to get it cashed.

OTHER FORMS OF CHECKS

Payable to Bearer

$250.00 Akron, O., March 4, 1904.

Cleveland National Bank, pay to E. J. Williams, or bearer, Two Hundred and Fifty Dollars.

R. M. Atwood & Co.

Payable to Order

$125.40 St. Paul, Minn., Oct. 1, 1904.

Commercial State Bank, pay to R. L. Holcomb, or order, One Hundred and Twenty-five and $\frac{40}{100}$ Dollars.

W. H. Unger.

Payable to Yourself

$50.00 Frankfort, Ky., Nov. 10, 1904.

Frankfort Exchange Bank, pay to myself Fifty Dollars.

E. J. Lang.

INDORSING CHECKS

How Indorsement Should be Written.—Write the indorsement across the back, not lengthwise, of the check.

Each Successive Indorsement should be written under those that precede it.

In Depositing a Check, write across the back "For Deposit," and below this your name. Checks thus indorsed can only be deposited, and should they be lost on the way to the bank the finder cannot use them.

Merely Writing Your Name on the Back is a blank indorsement, and signifies that it has passed through your hands and is payable to bearer, any one into whose hands it may come.

In Order to Make Check Payable to some Particular Person, write. Pay to the order of (person's name), and sign your name

Do not Send Away a Check Indorsed in Blank, but make it payable to the person to whom you send it. Then if lost it cannot be paid to any one else.

A Person must Indorse his Name as it is Written in the check. A check drawn payable to W. King, cannot be indorsed Wm. King. If drawn payable to Rev. W. King, it should be so indorsed, as bankers are very particular to have the name of the payee as given on the face of the note exactly reproduced in the indorsement.

If the Spelling of the Name on the Face is Wrong, indorse it in that way and then write it underneath correctly.

Responsibility of Indorsers.—The following table shows the relative responsibility of each indorser. Each indorser is responsible to the one below him.

In a note.	In an unaccepted draft or uncertified check.	In an accepted draft.	In a certified check.
1. Maker.	1. Drawer.	1. Acceptor.	1. The Bank.
2. 1st Indorser.	2. 1st Indorser.	2. Drawer.	2. 1st Indorser.
3. 2nd Indorser.	3. 2nd Indorser.	3. 1st. Indorser.	3. 2nd Indorser.
4. 3rd Indorser.	4. 3rd Indorser.	4. 2nd Indorser.	4. 3rd Indorser.
Etc.	Etc.	Etc.	Etc.

FORMS OF INDORSEMENTS

When Presented for Payment

W. King.

When Transferred

Pay to the order of S. E. Gross.
W. King.

When Deposited

BANKING RULES

1. Make your deposits in the bank as early in the day as possible, and never without your bank book.

2. Always use the deposit tickets furnished by the bank. When checks are deposited, the banks require them to be indorsed, whether drawn to the order of depositor or not.

3. Do not allow your bank book to run too long without balancing. Compare it with the account of the bank.

4. Write your signature with the usual freedom and never vary the style of it.

5. Draw as few checks as possible; when several bills are to be paid draw the money in one check.

6. Always keep your check book under lock and key.

7. In filling up checks do not leave space in which the amount may be raised. Always fill the space with a dash. Use words instead of figures.

8. If one who holds a check, as payee or otherwise, transfers it to another, he has a right to insist that the check be presented that day, or at farthest, on the day following.

9. If you wish to draw money from the bank on your own check, write: "Pay to myself " instead of writing your name in the body of the check.

10. If you write a check to a person who will have to be identified at the bank in order to receive payment, have him indorse the check and then beneath his signature write "Signature O. K.," and sign your name. This will enable him to draw payment on the check without further identification.

DRAFTS

Rules for Writing, Accepting and Transferring

What a Draft Is.—A draft is a written order by one person or firm upon another for the payment of a specified sum of money.

Names of Parties.—The one who writes the draft is called the drawer, the one on whom it is written is called the drawee, and the one to whom it is to be paid the payee.

When Payable.—Drafts may be made payable at sight, on demand, or at a certain time after date or after sight.

Negotiability.—Drafts are negotiable both before and after acceptance if made payable to order or bearer.

Drafts may be Drawn to One's Own Order, and then indorsed in favor of the party to whom they are to be sent.

Acceptance.—By acceptance is meant the act by which a person, upon whom a draft is drawn, binds himself to pay it when due. This usually is done by writing the word "Accepted," together with the date, in red ink across the face of the draft and signing the acceptor's name below.

When Acceptance is refused, it is said to be dishonored, and the drawer and indorser are held liable for payment. The draft is then protested.

Protest.—A protest is a formal declaration made by a notary public, under his hand and seal, at the request of the holder, of non-acceptance or non-payment, and the parties liable are formally notified. It is the practice of all banking institutions to protest all notes not paid at maturity, and checks presented when there are no funds to meet them. Protest may be made by the debtor.

Drafts Drawn at Sight or on Demand are not presented for acceptance, but for payment only.

Promise to Accept a Draft will be equivalent to an acceptance if it has given credit to the bill. In some States the promise to accept is required by Statute to be in writing.

Any Material Alteration of a draft after it has been drawn or accepted makes it valueless.

Death of Drawee.—Should the person upon whom the draft is drawn die before it is accepted, it should be presented to

his legal representatives. By Statute in some States a demand draft may be paid within a limited time after the death of drawee.

Bank Drafts.—A draft made by one bank upon another is called a bank draft. This is the most common kind. (See page 159.)

In Buying a Draft at the Bank, it is always best to have it made payable to yourself, and then indorse it in favor of the person to whom you intend to transfer it. This gives you a good receipt for the money.

Drafts on Foreign Countries are called bills of exchange. (See Bills of Exchange.)

Accustom yourself to taking and giving receipts, even in small business transactions. It may save you much trouble, worry and expense.

FORMS OF DRAFTS

To One's Own Order

$50.00 Lincoln, Ill., Feb. 2, 1904.

Ten days after sight pay to my own order Fifty Dollars, and charge to
J. H. JONES.

To William Hill,
Lincoln, Ill.

Sight Draft

$100.00 Davenport, Iowa Aug. 3, 1904.

At sight pay to the order of Henry Starr One Hundred Dollars, and charge to the account of FRANK LAWLER.

To William Dix,
Chicago, Ill.

Time Draft

$50.00 St. Joseph, Mich., Nov. 1, 1904.

At ten days' sight pay to the order of Warren Hazelteen at St. Joseph National Bank Fifty Dollars.

Value received. CHAS. HUNTER.

To H. R. Moser,
Lansing, Mich.

Time Draft, Second Form

$320.00 St. Paul, Minn., Oct. 1, 1904.

Twenty days from date pay to J. R. Kotter, or order, Three Hundred and Twenty Dollars. Value received JAMES CLARK.

To Wm. K. Asire,
St Paul, Minn.

BILLS OF EXCHANGE

How Drawn.—Bills of exchange, as drafts on foreign countries are usually called, are drawn in sets of three, each one referring to the other two. They are alike, except that they are numbered first, second, and third. If the first, which is usually kept by the purchaser to be presented by himself for payment at the foreign bank, is lost, then the second or third, being sent by mail, may be used. The payment of one cancels the other two. To distinguish them from other drafts they are sometimes called foreign bills of exchange, and the others are sometimes called inland bills of exchange.

The bank selling a Bill of Exchange, having money deposited in a foreign bank, orders the bill cashed there In this way travelers are saved the trouble and risk of carrying large amounts of money with them. Merchants engaged in foreign trade also find them very convenient, and make all their payments through Bills of Exchange.

FEDERAL TRUST & SAVINGS BANK

CHICAGO MAY 14 1904 No. 7718

PAY TO THE ORDER OF James M. Harris $150.00

One hundred fifty ✱ DOLLARS

NOT OVER ONE HUNDRED SIXTY 160

TO THE NATIONAL CITY BANK,

NEW YORK.

H. W. Magnus CASHIER.

121

A Bank Draft

Drawn by a Chicago bank, in favor of James M. Harris, on a bank in New York.

This is called a "New York draft." The cancellation mark shows it has been paid in New York and returned to the bank issuing it.

SET OF FOREIGN BILLS OF EXCHANGE

FORM 1

Chicago, Ill., Nov. 5, 1904.

Exchange for £100 *Ninety days after sight of this our First of Exchange (second and third of the same date and tenor unpaid) pay to the order of Chas. Wilson One Hundred Pounds Sterling, value received, and charge the same to*

Henry Horman & Co.

To the Commercial Bank of Glasgow, Glasgow, Scot.

No. 642

FORM 2

Chicago, Ill., Nov. 5, 1904.

Exchange for £100. *Ninety days after sight of this our Second of Exchange (first and third of the same tenor and date unpaid) pay to the order of Chas. Wilson One Hundred Pounds Sterling, value received, and charge the same to*

Henry Horman & Co.

To the Commercial Bank of Glasgow, Glasgow, Scot.

No. 642

FORM 3

Chicago, Ill., Nov. 5, 1904.

Exchange for £100. *Ninety days after sight of this our Third of Exchange (first and second of the same tenor and date unpaid) pay to the order of Chas. Wilson One Hundred Pounds Sterling, value received, and charge the same to*

Henry Horman & Co.

To the Commercial Bank of Glasgow, Glasgow, Scot.

No. 642

LETTERS OF CREDIT

A Letter of Credit is a letter from a bank or mercantile house addressed to its agents or correspondents elsewhere, requesting them to pay or advance money to the bearer of the letter.

How Secured.—The person who obtains a letter of this kind usually is required to deposit an equivalent sum with the person or firm from whom he obtains it, in money, bonds, mortgages or stocks.

A Copy of the Letter is also sent by mail to the person addressed, in which the bearer is so described that he may be recognized.

If the Letter is not Accepted by the person to whom it is addressed the bearer should at once notify the author and give the reason why it has not been honored.

Party Held Responsible.—The party whose signature the letter bears is held responsible for the amount involved, if the person to whom it is addressed accepts it.

FORM OF LETTER OF CREDIT

350 Broadway, New York, Jan. 10, 1904.

MESSRS. HAVART, REED & CO.;
London, Eng.

DEAR SIRS: We take pleasure in introducing to you Mr. Chas. P. Hodder of this city, who visits England for the purpose of investing in property in the city or vicinity of London, and desires to open a credit with you of Fifteen Thousand Dollars. We hereby authorize you to honor his drafts to an amount not exceeding in the aggregate the above-named sum and charge the same to us.

The signature of Mr. Hodder accompanies this.

Yours very respectfully,
FOSTER, WALKER & CO.

Signature of Chas. P. Hodder.

Foster, Walker & Co.'s Letter Sent by Mail

350 Broadway, New York, Jan. 10, 1904.

MESSRS. HAVART, REED & CO.,
London, Eng.

GENTLEMEN: We have to-day granted a letter of credit on your house (as per enclosed duplicate) to Mr. Chas. P. Hodder for Fifteen Thousand Dollars.

Mr. Hodder is forty-five years of age, five feet ten inches tall, has a light complexion, light brown hair, and blue eyes.

Respectfully yours,
FOSTER, WALKER & CO.

A GUARANTEE LETTER OF CREDIT

Jackson, Miss., March 9, 1904.

MR. WALTER COLEMAN,
Chicago, Ill.

DEAR SIR: Mr. Ira F. Van Arsdale, the bearer of this letter, is an extensive dealer in boots and shoes in this city, and is now about visiting your city for the first time, with a view of purchasing goods. We have reason to know the condition of his financial ability and his promptness in meeting his liabilities. We therefore readily guarantee the payment of any indebtedness that he may contract with your house not exceeding Ten Thousand Dollars.

Very respectfully,
MEYER, SCHULTZ & CO.,
175 Moline St.

The Letter Sent by Mail

175 Moline St., Jackson, Miss., March 9, 1904.

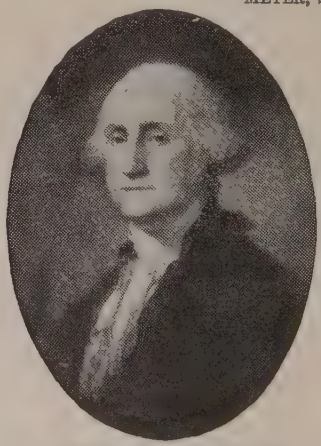
MR. WALTER COLEMAN,
Chicago, Ill.

DEAR SIR: We have to-day given a guarantee letter of credit upon you for Ten Thousand Dollars in merchandise. The bearer of our letter of credit is Mr. Ira F. Van Arsdale, an acquaintance of ours and a prominent merchant of this city.

Mr. Van Arsdale is thirty years old, six feet tall, has a dark complexion, with dark hair and eyes.

We commend him to your kind consideration.

Respectfully,
MEYER, SCHULTZ & CO.



GEORGE WASHINGTON

Washington studied and mastered without help the intricate forms of business. He copied bills of exchange, notes, drafts, bills of sale, receipts, and all the varieties of business forms, with a precision and elegance that were remarkable.—IRVING.

INTEREST LAWS AND STATUTES OF LIMITATION

Special laws in each state should be consulted.

States and Territories.	Interest laws.		Statute of limitations.			
	Legal rate, per cent.	Rate allowed by contract, per cent.	Judgments, years.	Notes, years.	Open accounts, years.	Days of grace
Alabama	8	8	20	5	6	3
Arizona	6	Any	5	4	3	0
Arkansas	6	10	10	5	3	3
California	7	Any	5	4	2	0
Colorado	8	Any	20	6	6	0
Connecticut	6	[1]Any	7	[10]6	6	0
Delaware	6	6	10	6	3	0
District of Columbia	6	10	12	3	3	0
Florida	8	10	20	5	[2]2	0
Georgia	7	8	7	6	4	[4]3
Idaho	7	12	6	5	4	0
Illinois	5	7	20	10	5	0
Indiana	6	8	20	10	6	3
Iowa	6	8	20	10	5	3
Kansas	6	10	5	5	3	3
Kentucky	6	6	15	15	5	0
Louisiana	5	8	10	5	3	3
Maine	6	Any	20	[3]20	6	0
Maryland	6	6	12	3	3	0
Massachusetts[8]	6	Any	20	6	6	0
Michigan	5	7	6 & 10	6	6	[4]3
Minnesota	6	10	10	6	6	3
Mississippi	6	10	7	6	3	3
Missouri	6	8	10	10	5	3
Montana	8	Any	[5]10	8	5	0
Nebraska	7	10	5	5	4	3
Nevada	7	Any	6	4	4	3
New Hampshire	6	6	20	6	6	0
New Jersey	6	6	20	6	6	0
New Mexico	6	12	7	6	4	3
New York	6	6	20	6	6	0
North Carolina	6	6	10	3	3	3
North Dakota	7	12	10	6	6	0
Ohio	6	8	15	15	6	0
Oklahoma	7	12	1	5	3	3
Oregon	6	10	10	6	6	0
Pennsylvania	6	6	5	6	6	0
Rhode Island	6	Any	20	6	6	0
South Carolina	7	8	20	6	6	3
South Dakota	7	12	10	6	6	3
Tennessee	6	[7]6	10	6	6	0
Texas	6	10	10	4	2	3
Utah	8	Any	8	6	4	0
Vermont	6	6	8	6	6	0
Virginia	6	6	[6]20	6	2	0
Washington	6	12	6	5	1	0
West Virginia	6	6	10	10	5	0
Wisconsin	6	10	20	6	6	0
Wyoming	8	12	5	5	8	0

[1]Over 6 per cent cannot be collected by law. [2]Three years for merchants. [3]Not witnessed, six years. [4]Not on notes or drafts on demand. [5]Not courts of record, five years. [6]When return not made on execution, ten years. [7]Rate prevailing in another State permitted on evidence of indebtedness wholly secured by mortgage on property in the other State. [8]In Massachusetts grace is allowed on sight drafts and bills of exchange.

unless otherwise stipulated therein. In some States there are special provisions of law limiting the rate of interest on small loans, secured by chattel mortgages, e. g. in Maine, on such loans for less than $200, 3 per cent per month for three months and thereafter 15 per cent per annum; in Massachusetts on loans for less than $1,000, 18 per cent per annum. [9]On witnessed notes 20 years. [10]In Connecticut on contracts under seal and non-negotiable promissory notes, seventeen years' absence from state often extends limitation.

LEGAL HOLIDAYS

In many states holidays are limited by law as to courts, schools, banks—one or all—etc.

When falling on Sunday, the Monday following is observed.

January 1. New Year's Day: In all the States (including the District of Columbia, Arizona, New Mexico, and Oklahoma), except Massachusetts, Mississippi and New Hampshire.

January 8. Anniversary of the Battle of New Orleans: In Louisiana.

January 19. Lee's Birthday: In Florida, Georgia, North Carolina, South Carolina, Virginia, and Alabama.

February 12. Lincoln's Birthday: In Connecticut, Delaware, Illinois, Minnesota, New Jersey, New York, North Dakota, Pennsylvania, Washington and Wyoming.

February 22. Washington's Birthday: In all the States (including the District of Columbia, Arizona, and Oklahoma), except Mississippi, where it is observed by exercises in the public schools only.

March 2. Anniversary of Texan Independence: In Texas.

March 4, in the District of Columbia, when it falls on the day the President is inaugurated.

April 19. Patriots' Day: In Massachusetts.

April 21. Anniversary of the Battle of San Jacinto: In Texas.

April 26. Confederate Memorial Day: In Alabama, Florida, Georgia, and Mississippi. In April, Feast day in Maine appointed.

May 10. Confederate Memorial Day: In North Carolina and South Carolina.

May (Second Friday). Confederate Day: In Tennessee.

May 20. Anniversary of the Signing of the Mecklenburg Declaration of Independence: In North Carolina.

May 30. Decoration Day: In all the States and Territories (and District of Columbia), except Florida, Georgia, Idaho, Louisiana, Mississippi, North Carolina, South Carolina, Texas. In Virginia, known as "Confederate Memorial Day."

May (last Friday). Pioneer Day: In Montana, observed in public schools.

June (first Monday), even years, general State election in Oregon.

June 3. Jefferson Davis' Birthday: In Florida, Georgia, and Alabama. In Louisiana, known as "Confederate Decoration Day."

July 4. Independence Day: In all the States, District of Columbia, and Territories.

July 24. Pioneers' Day: In Utah.

August 16. Bennington Battle Day: In Vermont.

September (first Monday). Labor Day: In all the States and Territories (and District of Columbia), except Arizona, Mississippi, Nevada, and North Dakota. In Louisiana, observed in Orleans Parish.

September 9. Admission Day: In California.

November 1. All Saints' Day: In Louisiana.

November—General Election Day: In Arizona, California, Colorado, Delaware, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon (vote for Presidential elections only), Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, West Virginia, Washington, Wisconsin, and Wyoming, in the years when elections are held therein.

November—Thanksgiving Day (usually the fourth Thursday in November): Is observed in all the States, and in the District of Columbia, Arizona, New Mexico, and Oklahoma, though in some States it is not a statutory holiday.

December 25. Christmas Day: In all the States, and in the District of Columbia, Arizona, New Mexico, and Oklahoma.

Sundays and Fast Days are legal holidays in all the States which designate them as such.

Arbor Day is a legal holiday in Arizona, Maine (for schools), Minnesota, New Mexico, Wisconsin, and Wyoming, the day being set by the Governor; in Texas, February 22; Nebraska, April 22; Utah, April 15; Rhode Island, May 11; Montana, second Tuesday in May; Florida, first Friday in February; Georgia, first Friday in December; Colorado (school holiday only), third Friday in April; in Oklahoma, the Friday following the second Monday in March.

Good Friday is a legal holiday in Alabama, Delaware, Louisiana, Maryland, Pennsylvania, and Tennessee.

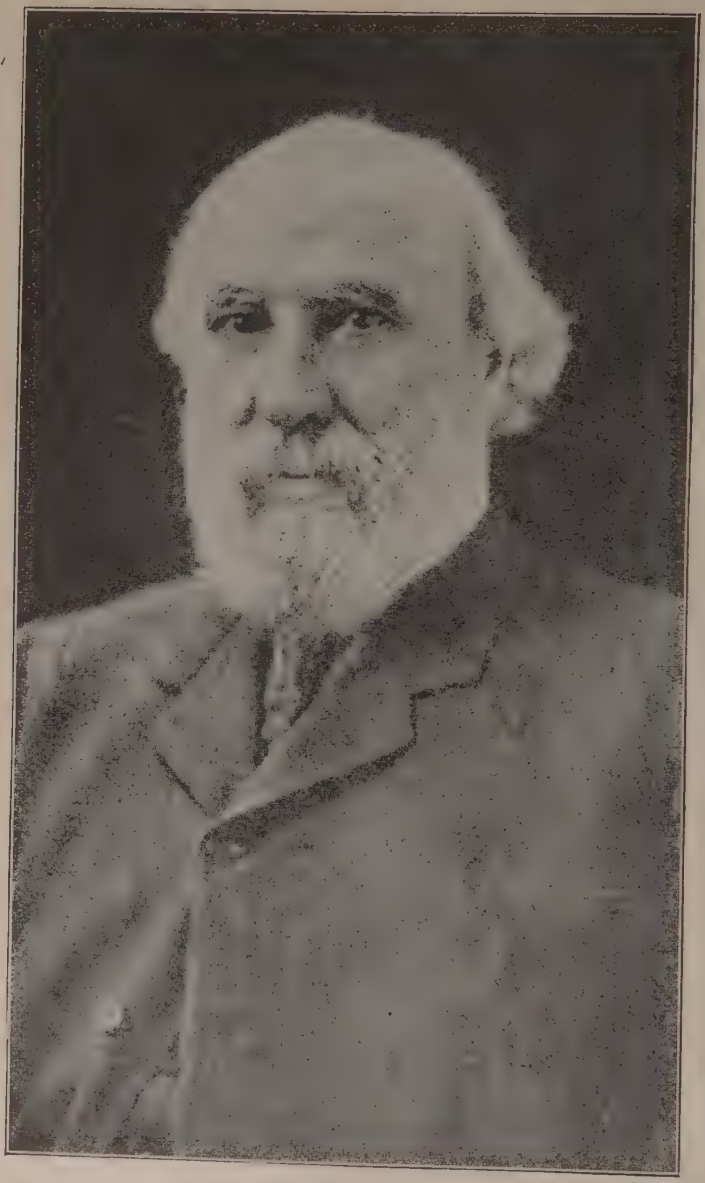
Mardi-Gras day (Shrove Tuesday or last day of Lent) is a legal holiday in Alabama and the parish of Orleans, Louisiana.

Every Saturday after 12 o'clock noon is a legal holiday in New York, New Jersey, Pennsylvania, Maryland, Tennessee, Virginia, the District of Columbia, and the city of New Orleans, and in Newcastle County, Del., except in St. George's Hundred; in Louisiana and Missouri in cities of 100,000 or more inhabitants; in Ohio in cities of 50,000 or more inhabitants; and June 1 to August 31 in Denver, Col.

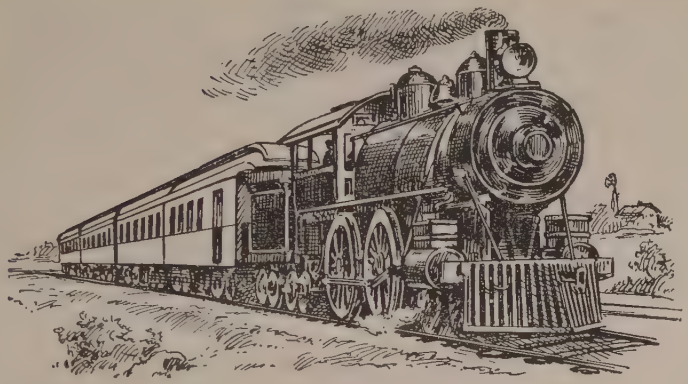
There is no national holiday, not even the Fourth of July. Congress has at various times appointed special holidays. In the second session of the Fifty-third Congress it passed an act making Labor Day a public holiday in the District of Columbia, and it has recognized the existence of certain days as holidays for commercial purposes, but with the exception named, there is no general statute on the subject. The proclamation of the President designating a day of Thanksgiving only makes it a legal holiday in the District of Columbia and the Territories, and in those States which provide by law for it.

PART V

Transportation, Arbitration, Corporations, etc.



J. J. HILL
Thoughtful and Conservative
The Prince of Railroad Owners and Operators



TRANSPORTATION

Liability of Railroad and Express Companies

The Business of Transportation, especially of goods and merchandise, and the laws which regulate the same are of great importance, and should be thoroughly understood by every one.

Carriers.—Those who transport goods for others are called carriers, and since all the business is done under contract such contracts are very numerous.

Common Carriers.—A common carrier is one whose business is the carrying of goods or persons from place to place for a consideration, either by land or water.

The most common ones are the railroad, steamboat, steamship, and express companies, but truckmen, teamsters, expressmen, and others who offer their carrying services to the public generally are also common carriers.

Common Carriers of Goods

Two Elements are Necessary to constitute one a common carrier (1) his following it as a business, and (2) his offering his services for hire to the public generally. Those who work only for a particular person are not common but private carriers.

Obligation to Take.—A common carrier is obliged by law to take any goods that are offered to him for transportation

to any point on his route, provided his usual compensation is offered him in advance.

In case the carrier's cars are full he may refuse to take more; he may also refuse to carry freight of a dangerous character, such as explosives.

Rates.—Carriers may establish such rates, provided the same are reasonable, or make such contracts as they choose. Large corporations usually have established schedules of rates. They can change these from time to time, but they must accept the goods of all persons at those rates. They cannot demand more from one person than from another, but must treat all alike.

Discrimination Unlawful.—The carrier must not make unjust discrimination as to prices of carriage. Before the passage of the Inter-State Commerce law, systematic discrimination in their charges was practiced by some of the railroad companies in the United States. Great corporations were given low rates for their vast shipments, while the small shipper was crushed by much higher charges for transportation. Unjust discriminations were also made between different towns and localities. The Inter-State Commerce law renders such discriminations unlawful.

Compensation.—Common carriers may demand their pay in advance, yet they often transport the goods and collect the freight from the person receiving the same.

In case the person to whom the goods are sent refuses to pay the charges the carrier must collect from the sender, for it was with him the contract was made and he alone can be sued. The other party made no contract with the carrier, hence cannot be sued. But if the sender is acting as the agent of the person to whom they are to be sent the company may sue the latter, for in that case the contract was made with him.

Diligence and Dispatch.—A common carrier is bound to carry the goods with reasonable diligence and dispatch, and safely deliver them to the person to whom they are consigned, without any loss or injury, except such as may be occasioned by the act of God, the public enemy, or the fault or fraud of the owner.

When Liable Beyond His Own Route.—If a carrier re-

ceives goods for transportation and agrees to deliver them beyond the terminus of his own route he renders himself responsible for the whole route. He may by special contract limit his liability to his own route, and absolve himself by safe delivery to the next connecting carrier.

Carrier's Lien.—Common carriers have another way to obtain their pay. Common carriers may keep the goods they have transported until their charges are paid.

Thus, there are three ways in which a carrier may enforce payment of his freight, viz.:

1. He may refuse to take the goods unless payment is made in advance.
2. He may transport them and then keep them until paid.
3. He may transport and deliver them and then sue the person with whom he made his contract.

Loss or Injury.—Common carriers are responsible for any loss or injury occurring to goods which they are transporting. Any damages that have occurred to the goods while in possession of the carrier must be made good. He has complete control over the goods as if they were his own, and if while in his possession they suffer injury it is his loss.

The carrier is not liable for the "act of God," such as cyclones, floods, lightning, a public enemy as in war, or (in shipping) for perils of the sea. But fire, unless caused by lightning, does not come under this head. Robbery or theft does not relieve them from liability.

Any damages that have occurred to the goods while in possession of the carrier must be made good if it occurred through the carelessness of any of the employees.

Perishable Goods.—Carriers are not responsible for loss to fruits that decay in their possession, or goods shipped in defective boxes or carelessly packed, such as glassware, crockery or other articles that are easily broken.

If a package is of great value, such as money, the common carrier must be informed of it.

Collecting Damages.—In case of damage to goods the railroad or express company should be duly notified and the amount of damages stated or sworn to before a proper officer and with sufficient evidence, if required.

A common carrier must pay the market value at the point of destination of all property lost or destroyed by his fault while in his care for transportation.

Receipt.—In shipping goods by freight or express a receipt or bill of lading should always be taken and carefully preserved.

Bills of Lading.—The bill of lading is the carrier's acknowledgment of the receipt of goods, and is evidence of contract between the parties, and is supposed to contain all the carrier's claim for non-liability. Three copies of the bill are made out; one is kept by the shipper, another by the party transporting the goods, the third is sent to the person to whom the goods are consigned.

Bills of Lading are transferable and assignable, and the assignee may sue for the recovery of the goods.

Form of Bill of Lading

New York, December 10, 1904.

Shipped in good order, and well conditioned, by *James C. Hanton* .....on board the ship *Goodspeed*.....

Marked as follows:

Sylvester Clyde,
Rio Janeiro.

whereof *Chas. Bollman*..... is master, now lying in the port of *New York*.....and bound for the port of *Rio Janeiro*.....

500 *barrels of flour*, being marked and numbered as in the margin, and are to be delivered in the like order and condition at the port of *Rio Janeiro*..... (the danger of sea only excepted) unto *Sylvester Clyde*.....or his assigns, he or they paying freight for the said cases, with ten cents primage and average accustomed.

In witness whereof I have affirmed to three bills of lading, all, of this tenor and date; one of which being accomplished the others to stand void.

HENRY R. SANDFORD.

(In the above form, Hanton is the shipper or consignor, Clyde the consignee, and Sandford the carrier. It might be signed by the master (Bollman) instead of by Sandford.)

Common Carriers of Persons

A common carrier of persons is one who holds himself out to carry for hire from place to place all such persons as

choose to employ him. Railroads, steamboats, street car, omnibus and stage line companies are the most common.

His Duty.—He must carry all persons who may present themselves for carriage, provided they are in a proper condition and offer their fare. He is bound to provide suitable and proper means of conveying, with suitable attention.

His Liability.—He is bound to use the highest degree of care and diligence in the conduct of his business and is responsible for negligence of any kind. He is bound to protect the passengers against insult or injury from his servants or employees. He must give passengers reasonable time to get off and on the carriage and suitable means of doing so.

Baggage.—Passenger carriers are responsible for the baggage of their patrons. If the servants of the carrier are allowed to carry parcels, the carrier will be responsible for their safe delivery, although the carrier derives no benefit therefrom.

A Baggage Check is evidence of the liability of the company issuing it.

Baggage does not include merchandise, or money, except an amount reasonable for expenses.

If a carrier sells a personal ticket to a point beyond the terminus of his own route, and especially if he also checks the baggage to such a point, he is responsible for the safety of the baggage to that point.

ACKNOWLEDGMENTS

An Acknowledgment is a declaration, before an authorized officer, of a party who has executed a deed or other document, that it is his free and voluntary act.

What Instruments Must be Acknowledged.—All deeds and conveyances of land, to be effectual as to third parties, must be recorded upon previous proof or acknowledgment of their execution. In some of the States, chattel mortgages must be acknowledged and recorded the same as deeds.

Before Whom Taken.—Within the several States acknowledgments may be taken in general before Notaries Public

and Justices of the Peace within their territorial jurisdiction, and in several States other officers are especially empowered by statute to take acknowledgments.

Without the State and within the United States.—The Statutes of each State provide for the taking of acknowledgments without the State and in foreign countries, usually by Notaries Public, Justices of the Peace and Commissioners appointed for the purpose by the authorities of the State where the land lies.

(See deeds for forms in several States.)

AFFIDAVITS

An Affidavit is a statement made under oath (or affirmation) before an authorized official, and signed by the person making it.

For What Used.—In judicial proceedings, except for trial of causes, affidavits are the usual means of presenting evidence to the court, and are most frequently used to support or oppose the numerous applications for orders, known as motions.

No Particular Form is prescribed by law, but the affidavit must specify the State and county in which it is made, so as to show that the officer who administered the oath had authority to do so.

The Statement should be confined to facts within the actual knowledge of the person making the affidavits, or when made on information and belief, that fact should be stated.

Jurat.—The officer taking the affidavit affixes a clause called the jurat, certifying the time and fact of the oath.

Who may Take.—Judges, Justices of the Peace, Notaries Public, and other and similar officers have authority to take affidavits.

GENERAL FORM OF AFFIDAVIT

State of Pennsylvania, }
Alleghany County, City of Pittsburg. } ss.

Bernard Beckman, being duly sworn (affirms), deposes (declares) and says (or alleges and says): That (here set out in full and accurate language the matters to be alleged).

[SEAL] BERNARD BECKMAN.

Sworn (or affirmed) before me, this fifteenth day of January, A. D. 19...

JOHN WELLNER,
Justice of the Peace.

(If the affiant is unable to read, the subscription should be as follows:)

Subscribed and sworn to before me, this ..... day of ....., A. D. 19..., the same having been by me (or in my presence) read to this affiant, he being illiterate (or blind), and understanding the same. (Officer's signature and title.)

Affidavit to Accounts

STATE OF ILLINOIS, } ss.
County of Cook, }

Franklin Gage, of Chicago, in said County and State, being duly sworn, deposes and says: That the above account, as stated, is just and true.

That the above sum of Fifty Dollars is now justly due and owing to this deponent by the above named James Higgins.

That he, the said Francis Gage, has never received the same or any part thereof, either directly or indirectly, nor any person for him, by his direction or order, knowledge or consent. FRANKLIN GAGE.

Sworn and subscribed before me, this ninth day of June, A. D. 19...

MICHAEL SWANN,
Justice of the Peace.

Affidavit to Declaration or Petition

STATE OF ILLINOIS, } ss.
County of Sangamon, }

Abel Jones, being duly sworn, says: That the facts set forth in the foregoing declaration (or petition) are true. ABEL JONES.

Subscribed and sworn to before me this tenth day of June, A. D. 19...

ISAAC MYERS,
Justice of the Peace.

AGENCY

An Agent, in law, is a person authorized to act for another, called the principal, the relation between them being known as agency.

Agency is one of the most common and necessary relations of life. Nearly every one acts every day as the agent of some one else. Thus every clerk in a store is the agent of the proprietor. Almost all the business of brokers, commission merchants, lawyers, auctioneers, etc., is some sort of an agency. Corporations act wholly by means of agents, viz.: their officers, clerks, etc.

Who May Act as Principal or Agent.—Any one who is

competent to do business for himself may act as principal, and appoint an agent to transact it for him. Persons who cannot do business for themselves may, however, be appointed to act as agents. Therefore minors and married women may act as agents.

A General Agent is one authorized to represent his principal in all his business of one particular branch.

A Special Agent is one appointed to a particular thing only, or a few particular things.

How Appointed.—An agent's authority may be given orally or by writing; no particular form of words is necessary. In important matters, the agent is often appointed by a written instrument which is called a power of attorney. When thus authorized under seal and said instrument duly acknowledged and recorded, an agent can sign deeds, or other conveyances of real estate or sealed instruments.

Extent of Authority.—The employing of an agent is the act which gives him his authority. An agent has authority to do whatever is necessary or generally done in connection with the purposes for which he is employed. Some employments give very wide latitude of power, and leave very much to the discretion of the agent; others give a very limited authority.

Liability of Principal.—The principal is responsible for the acts of his agent committed in the execution of the agency and which are within the scope of the agent's authority. A distinction is here made between a special and a general agent. If a special agent exceeds or disobeys his instructions the principal is not liable; but if a general agent exceeds his authority the principal will be bound, if the act is within the apparent scope of an agent's authority, when it is such an act as is natural and usual in transacting business of that kind. By appointing him to do that business, the principal is considered as saying to the world that his agent has all the authority necessary to transact it in the usual way. For any criminal act, however, of the agent, the principal is not responsible unless he authorized him to commit it.

Wrongful Acts of Agents.—As to wrongs and injuries, or

torts, as they are called in law, the general rule is that the principal is liable to third persons for the wrongful acts of the agent when acting within the scope of his agency. But this does not relieve the agent of personal liability himself.

The Agent's Liability.—1. To his Principal. An agent is bound in transacting the affairs of his principal to exercise all the care which a reasonable man would exercise in his own, and to the utmost good faith. For any loss to the principal through neglect or unfaithfulness, the agent is liable to him. 2. To the Third Party. If an agent conceals his character as an agent, or transcends his authority, or if he expressly binds himself in any way, he is himself liable to the third party.

Accounting.—The principal may call his agent to an account at any time, and may recover full indemnity for all injuries sustained by reason of the positive misconduct or negligence of the agent, or by his transcending his authority. An agent is not liable to his principal for not accounting until demand, which demand should be made, and sufficient opportunity given him for payment.

Compensation fees against the principal.—An agent is entitled to compensation for his services, and reimbursement for the expenses of his agency, and for personal loss or damage in properly transacting the business thereof.

Sub-Agents.—An agent may in many cases himself appoint another agent and act through him. Such a person is called a sub-agent, and is responsible to him who has appointed him, as his principal. In most commercial transactions sub-agents may be employed.

In Whose Name the Business is Done.—All business should be transacted and money deposited in the name of the principal.

Mixing Property.—If an agent mixes his own property with that of his principal, so that it cannot be identified, it will all belong to the principal.

Responsibility to Third Party.—Ordinarily a person can only be responsible for his own acts, but an agent's act is really considered as that of his principal. Therefore the rule is that the principal is responsible for the acts of his agent. The principal is bound even though he was un-

known at the time the act was done, because he is supposed to derive the benefit of the same.

Ratification.—If a principal ratifies an act done, he is bound by it, whether he had given the agent authority or not. Subsequent ratification is equivalent to prior authority. But if such ratification is made under a mistake of circumstances it is not binding.

Responsibility of Third Party.—A person doing business with an agent is just as responsible to his principal as though he had transacted the business with the latter in person.

Revocation.—It is always in the power of the principal to revoke an agency; but if the power conferred is coupled with an interest, as where an agent has power to sell goods and apply the proceeds to his own use; or if it is given for valuable consideration, and a continuance of the agency is necessary to meet the responsibilities he has assumed in advance, to carry it on, then such agency cannot be revoked at the pleasure of the principal.

How to Revoke an Agency.—It must be done by an express act of the principal or by the act of law. The first implies a written form revoking the power of attorney that has been conferred, or any express declaration to revoke. The second occasion may be the death of the principal or agent.

Notice to be Given.—Due notice should be given by the principal of such revocation to those who knew of the authority given to such agent, because a general authority may continue to bind the principal after it has been actually recalled, if the agency were well known and the recalling of it wholly unknown to the party dealing with the agent without that party's fault.

Power of Attorney.—The authority by which one person is empowered to act in the place or as the attorney of another is called a power of attorney. The power of attorney is usually in writing and under seal, though for many purposes it may be created by parol. Strict rules of construction are applicable to these instruments, and courts incline to construe even general powers narrowly rather than broadly. If the power of attorney is to be recorded it should

be properly acknowledged before an officer the same as a deed.

General Form of Power of Attorney

Know all Men by These Presents, That I, William Brown, of Chicago, County of Cook, and State of Illinois, have made, constituted, and appointed and by these presents do make, constitute, and appoint, George B. Stadden my true and lawful attorney for me and in my name, place and stead, [*here state the purpose for which the power is given*], giving and granting unto my said attorney full power and authority to do and perform all and every act and thing whatsoever, requisite and necessary to be done in and about the premises, as fully, to all intents and purposes, as I might or could do if personally present, with all power of substitution and revocation, hereby ratifying and confirming all that my said attorney or his substitute shall lawfully do or cause to be done by virtue thereof.

In witness whereof, I have hereunto set my hand and seal the second day of January, one thousand nine hundred and .....

WILLIAM BROWN. [SEAL]

Signed, Sealed, and Delivered
in Presence of
.....

Power to take Charge of and Carry on Business

Know all Men by these Presents, That I, Henry Saylor, of Aurora, Illinois, do by these presents appoint, constitute, and make R. I. Winters my true and lawful attorney, for me and in my place and stead to take charge of my business of general merchandising at Aurora, Illinois; to purchase and sell for cash or on credit all such articles, goods, merchandise, and wares, as he shall deem proper, necessary, and useful in said business; to sign, accept, and indorse all notes, drafts, and bills; to state accounts; to sue and prosecute, compromise, collect, and settle all claims or demands due or to become due, now existing or hereafter to exist in my favor; to adjust and pay all claims or demands which now exist or may hereafter arise against me, either connected with said business or otherwse.

In witness whereof, I have hereunto set my hand and seal, this — day of ———, 19—. HENRY SAYLOR. [SEAL.]

Power to Vote as Proxy

Know All Men by These Presents, That....., the undersigned, Stockholder in the..... do hereby appoint.....true and lawful Attorney, with power of substitution, for.....and in..... name, to vote at the meeting of the stockholders in said..... to be held at.....or, at any adjournment thereof, with all the powers.....should possess if personally present, hereby revoking all previous proxies.

.....190...

Witness

.....

Letter of Revocation

Know all Men by These Presents, That I, Fred B. Jennings, of Reading, Pennsylvania, in and by my letter of attorney, bearing date the ——— day of ———, did make, constitute, and appoint R. L. Hartmann my attorney, as by said letter more fully appears.

That I, the said Fred. B. Jennings, do by these presents annul, countermand, revoke, and make void said letter of attorney and all authority and power thereby given said attorney, R. L. Hartmann.

In witness, etc.

FRED. B. JENNINGS.

APPRENTICESHIP

An Apprentice is a person bound to service for a number of years, and receiving in return instruction in his master's business. Although in most of the States the contract is provided by statute, apprenticeship, as a necessary means of access to a trade, has been almost universally abolished.

Form of Contract of Apprenticeship

This indenture of apprenticeship, between John Wilson, father of Harry Wilson, on the one part, and Chas. Hastings, of the other part, witnesseth. That the said Harry Wilson, aged 15 years on the 20th day of January, A. D. 19.., is hereby bound as an apprentice under the said Chas. Hastings, from the date hereof until the 20th day of January, 19.., to learn the trade and art of a printer, and is faithfully to serve the said Chas. Hastings and correctly conduct himself during the term of his apprenticeship.

And the said Chas. Hastings hereby covenants that he will teach the said Harry Wilson the said trade and art, and will furnish him, during said apprenticeship, with board, lodging, washing, clothing, medicine and other necessaries suitable for an apprentice in sickness and health; and will send him to a suitable public school at least three months during each of the first two years of said term; and at the expiration of the said apprenticeship will furnish him with two new suits of common wearing apparel and one hundred dollars in money.

In testimony whereof, the parties hereto have set their hands and seals this twentieth day of January, A. D. 19...

Witnesses { F. B. ATKINSON. / HENRY MEYERS.

(Apprentice) HARRY WILSON.
(Master) CHAS. HASTINGS.
(Parent) JOHN WILSON.

Release of an Apprentice

Know all Men by These Presents, That —, son of —, did, by his indenture, bearing date the — day of —, A. D. 19—, bind himself as an apprentice unto — of —, for a term of — years (or until he should be of legal age) from the date thereof, as by said indenture more fully appears.

BENJAMIN FRANKLIN.

Seest thou a man diligent in his business. He shall stand before kings. —Prov. xxii; 29.

That [*here state fully the reasons for the release*] by reason whereof, the said — doth hereby release and forever discharge said — and his father, — of and from said indenture and all service and all other agreements, covenants, and things contained therein, on their or either of their parts, to be observed and performed whatsoever, unto the day of this release.

In witness whereof, I have hereto set my seal this — day of —, A. D. 19—.

(Signature.)

ABRAHAM LINCOLN

"Think twice before you sue your neighbor."

ARBITRATION

The Law Favors the peaceful settlement of controversies, and in many of the States there are statutes providing for the submission of disputed matters to the decision of one or more persons, called arbitrators. Their decisions are called awards.

The Statutes Generally Provide that if the parties to any suit in a court of record desire to submit the matter involved to arbitrators, an order may be entered directing such submission to three impartial and competent persons, to be named in such order—such arbitrators to be agreed upon and named by the parties, and if they fail to agree, each shall name one, and the court the third.

How Arbitration is Conducted.—The arbitrators so appointed are sworn, and proceed to hear and determine the matter, and draw up an award. The proceedings are much like proceedings in court or before a master in chancery in most states. A copy of the award is delivered to each party, and if either party fails to comply therewith, the other with-

in a year may file said award in court, and obtain a judgment.

Matters Not in Suit.—All persons having a requisite legal capacity may, by an instrument in writing, signed and sealed by them, submit to one or more arbitrators any controversy existing between them, and may, in such submission, agree that a judgment of any court of record, competent to have jurisdiction of the subject-matter named in such instrument, shall be rendered upon the award made pursuant to said submission.

The Agreement to Submit should state explicitly what powers are intended to be conferred on the arbitrators, either by referring all controversies, or by distinctly limiting the particular controversies intended.

Reasonable Notice.—All arbitrators and all parties should have reasonable notice of the time and place of the hearing.

The Proceedings at the hearing, and the award itself should perfectly agree with the terms of agreement to submit.

The Award should be a clear, distinct and final determination of each and all the matters of controversy contained in the agreement, and should embrace nothing more. If it be a rule of court it should be sealed up, otherwise a copy should be given to each party.

The award must be signed by the arbitrators, or in some states a majority of them.

Submission may be Recalled before the award of the arbitrator or arbitrators is made, or in New York before the allegation and proof of the parties have been closed and the matter finally submitted to the arbitrators.

Form of Agreement to Refer to Arbitrators

Know all Men by These Presents, That we, the undersigned, hereby mutually agree to submit all the matters in difference between us, of every kind, name, and nature, to the determination and award of Chas. Barker, Wm. Becker, and Robert Rehling, of Logansport, Cass County, Indiana, as arbitrators.

That said arbitrators, or any two of them, shall hear and determine the matters in dispute between us, and award the payment of all the costs and expenses incurred in such arbitration. That the said arbitrators shall make their award in writing on or before the fifteenth day

of April, A. D. 19... Done at Logansport, Indiana, March 15, A. D. 19...

R. L. RAY
J. L. HOLMES, } Witnesses.

HENRY GASSER,
ROLAND R. CODY,

Form of Notice to Arbitrators

GENTLEMEN: You have been chosen arbitrators on behalf of the undersigned, to arbitrate and award between them, in divers matters and things set forth in their submission, which will be produced for your inspection when you meet at —, in —, on the — day of —, at — o'clock — M., to hear the allegations and proofs.

Dated, etc.

HENRY GASSER,
ROLAND R. CODY.

Form of Arbitration Bond

Know all Men by These Presents, That Henry Gasser and Roland R. Cody have this — day of —, A. D. 19—, submitted their matters in controversy concerning the boundary and division lines of a certain tract of land [*describe it*] to Chas. Barker, Wm. Becker, and Robert Rehling, to arbitrate, award, order, judge, and determine of and concerning the same.

That we, the undersigned, bind ourselves in the sum of — dollars that said Henry Gasser and Roland R. Cody shall submit to the decision and award of said arbitrators, provided said award be made in writing on or before the — day of—, A. D. 19—.

(Signed) FRED HODGETTS,
CHAS. R. WILLIAMS.

Form of Award

Know all Men by These Presents, That we, the undersigned, arbitrators of all the matters of difference, of every name, kind, and nature, between Henry Gasser and Roland R. Cody, by virtue of their agreement of submission of March 15, 19.., do award, order, judge and determine of and concerning the same as follows: That [*then state the award in full*].

In witness whereof, we have, in each other's presence, hereunto set our hands this tenth day of April, 19...

CHAS. BARKER,
WM. BECKER,
ROBERT REHLING.

ASSIGNMENTS

An Assignment is the transfer of a debt, obligation, bond, wages, or any kind of property, personal or real, or any actual interest therein. It also signifies the written instrument by which the transfer is effected.

How Made.—An assignment may be written on the back of the instrument it is intended to convey, or on a separate paper.

No Formality is Required by law in an assignment. Any instrument between the contracting parties that goes to show their intention to pass the property from one to the other will be sufficient. Proof will be called for only when it appears that it was merely a sham or fraudulent transaction.

Lands and Tenements.—Assignments relating to lands and tenements must be duly signed, sealed, acknowledged and recorded, like a deed.

For Benefit of Creditors.—Where property is assigned for the benefit of creditors, its actual transfer to the assignee must be made immediately. Such an assignment covers all of the assignor's property, whatever and wherever it may be, which is not exempt from execution.

Preferring Creditors.—At common law the assignor might give preference to certain of his creditors, but this is now generally prohibited by statute.

Correct Schedules of the property assigned should accompany the assignment in all cases.

An Assignment of a Mortgage carries with it in most states at the same time, without a transfer the debt, note or bond, but to avoid complications the note or bond should be transferred also.

Some Things are not Assignable, as pensions, government bounties, personal trusts, as a guardianship, or the rights of a master in his apprentice.

Form of Simple Assignment

For value received, I hereby assign all my right, title, and interest in the within contract to Chas. Hillman.

Dated Cleveland, Ohio, November 10, A. D. 19...

MAURICE SANDFORD.

Assignment of Account

In consideration of One Dollar, value received, I hereby sell and assign to W. C. Cole the within account, which is justly due from the within George Sanders, and I hereby authorize the said W. C. Cole to collect the same.

Chicago, March 10, 19...

JAMES HASTER.

Assignment of Mortgage

Know all Men by these Presents, That I, William Bower, the within named mortgagee, for a consideration of Six Hundred Dollars hereby assign, transfer, and set over to Henry Klingman, his heirs and assigns, the within named instrument of mortgage, and all the real estate, with appurtenances therein mentioned and described, to have and to hold the same forever, subject, nevertheless, to the equity and right of redemption of the within named James Yundt, his heirs and assigns therein.

In witness whereof, the party of the first part has hereunto set his hand and seal this fifth day of April, A. D. 19...

WILLIAM BOWER. [SEAL]

Sealed and delivered in presence of }
EDWARD MILLER. }

This should be acknowledged and recorded same place as mortgage.

Assignment with Power of Attorney

In consideration of the sum of One Thousand Dollars (the receipt of which is hereby acknowledged), I do hereby assign, transfer, and set over to Martin Scott (of Chicago, Ill.) all my right, title, and interest in and to [*here describe what*]. And I hereby constitute said Martin Scott my attorney, in my name or otherwise, but at his own costs and charges, to take all legal measures which may be proper or necessary for the complete recovery and enjoyment of the premises.

Witness my hand and seal this twentieth day of January, A. D. 19...

(Witnesses) HENRY LONG.

Assignment for the Benefit of Creditors

Know all Men by These Presents, That whereas I, William Colerage, merchant of the city of Minneapolis, and State of Minnesota, am indebted to various persons in considerable sums of money, which I am at present unable to pay in full, and being desirous to convey all my property for the benefit of my creditors, without preference or priority other than that provided by law:

Now, therefore, I, in consideration of the premises, and of the sum of One Dollar paid to me by Chas. Watson, of the same city and State, do hereby grant, bargain, sell, assign, and convey unto the said Chas.

Watson all my lands, tenements, goods, and chattels of every name, nature, and description, wheresoever the same may be, excepting and reserving only such property as is exempted by law from attachment.

To have and to hold the same unto the said Chas. Watson, in trust and confidence, to sell and dispose of the said real and personal estate for cash upon such terms and conditions as in his judgment may appear best, and apply the proceeds in the following manner, to-wit:

First. To pay all such debts as by the laws of the United States are entitled to preference in such cases.

Second. To pay and discharge all the just and reasonable expenses, cost, and charges of executing this assignment.

Third. To distribute and pay the remainder of said proceeds to the creditors of the party of the first part for all debts and liabilities which he may owe, rateably, in proportion to their respective claims.

Fourth. The residue and remainder of the proceeds of said sales, if any there be, shall be paid over to me, my executors, administrators, or assigns.

In witness whereof, I have hereunto set my hand and seal this fifteenth day of February, A. D. 19..

Executed and delivered in presence of
JOHN MYERS,
HENRY BEST.

WILLIAM COLERAGE. [SEAL]

N. B.—In some states creditors should assent to send an assignment. The law as to assignments vary in different states.

BAIL

Definition.—Bail is surety given for another's appearance in court. It is required in criminal cases generally and in civil cases involving tort or fraud. The term bail is applied also to the sureties themselves, and to the amount in which they bind themselves for the appearance of their principal.

Excessive Bail.—The constitution of the United States and the several States provide that excessive bail shall not be required.

Bail Bond.—The bond given by the sureties is termed a recognizance, and in case the prisoner does not appear for trial, or forfeits his bail, as it is termed, the sureties have to pay whatever sum is pledged in the bail bond or recognizance.

Form of Bail Bond or Recognizance

STATE OF ILLINOIS, } ss.
County of Kane. }

This day personally appeared before the undersigned, a justice of the peace in and for said county, Charles Seibert and Frank Stanton, all of Aurora, in said County and State, and jointly and severally acknowledged themselves to be indebted unto the people of the State of Illinois, in the sum of Five Hundred Dollars, to be levied of their goods and chattels, lands and tenements.

Whereas, the above bounden Charles Seibert, on the tenth day of November, A. D. 19.., was brought and examined by and before John Brown, a justice of the peace in and for the county aforesaid, on a charge preferred against the said Charles Seibert [*here state the offense charged*] in said county, and the further examination of said Charles Seibert having been continued to the ninth day of December, A. D. 19.., at 10 o'clock A. M., and the said Charles Seibert having been adjudged and required by the said justice to give bonds, as required by the statute in such case made and provided, for his appearance to answer to said charge. Now the condition of this recognizance is such that if the above bounden Charles Seibert shall be and appear before the undersigned, at his office, in the city of Aurora, in said county, on the ninth day of December, A. D. 19.., at ten o'clock, A. M., then and there to answer to the said people of the State of Illinois, on said charge, and abide the order and judgment of said court, and not depart the same without leave, then and in that case this recognizance to become void, otherwise to be and remain in full force and virtue.

As witness our hands and seals this tenth day of November, A. D. 19...

CHARLES SEIBERT. [SEAL.]
FRANK STANTON. [SEAL.]

Taken, entered into, and acknowledged before me this tenth day of November, A. D. 19...

JOHN BROWN,
Justice of Peace.

In some States the recognizance may be oral in open court.

BAILMENTS

Definition.—Bailment is a delivery of goods or money by one person to another in trust, for some special purpose, upon a contract, expressed or implied, that the trust shall be faithfully executed.

Names of Parties.—The owner of the goods bailed is termed the bailor, and the person to whom they are delivered or bailed, the bailee.

The Responsibility of Bailees is governed by the consid-

eration whether, in the case of the thing bailed, they have been guilty of ordinary neglect, gross neglect, or slight neglect. Ordinary neglect is the omission of that care which every man of common prudence takes of his own concerns. Gross neglect is want of that care which every man of common sense, how inattentive soever, takes of his own property. Slight neglect is the omission of that diligence which every circumspect and thoughtful person uses in securing his own goods and chattels.

The Rules Governing the law of bailments are: 1. A bailee who derives no benefit from his undertaking is responsible only for gross neglect, or, in other words, for a violation of good faith. 2. A bailee who alone receives benefit from the bailment, is responsible for slight neglect. 3. When the bailment is beneficial to both parties the bailee must answer for ordinary neglect. 4. A special agreement of any bailee to answer for more or less, is in general valid. 5. All bailees are answerable for actual fraud, even though the contrary be stipulated. 6. No bailee is chargeable for a loss by inevitable accident, except by special agreement.

A Borrower for Use is responsible for slight negligence.

A Pawnee is answerable for ordinary neglect.

A Depositary, one who receives goods or money to be kept for the bailee without a recompense, is responsible only for gross neglect.

A Carrier of goods or money without reward is responsible only for gross neglect, or breach of good faith.

A Private Carrier for hire, by land or water, is answerable for ordinary neglect.

The Hirer of a Thing is answerable for ordinary neglect.

A Workman for Hire must answer for ordinary neglect of the goods intrusted to him, and apply a degree of skill equal to his undertaking.

All Bailees Become Responsible for losses by casualty or violence, after their refusal to return the things bailed, on a lawful demand.

Borrowers and Hirers are answerable in all events, if they keep the things borrowed or hired after the stipulated time, or use them differently from their agreement.

Depositories and Pawnees are answerable, in all events, if they use the things deposited or pawned.

Innkeepers.—An innkeeper is responsible for the acts of his domestics, and for thefts, and is bound to take all possible care of the goods of his guests. He is regarded as an insurer, responsible for any injury or loss, not caused by the act of God, the common enemy, or neglect or fault of the owner. When, however, a guest has the exclusive keeping and occupancy of a room, the inkeeper is not liable, nor where the guest takes upon himself the care of the goods, or neglects to use ordinary caution.

Warehousemen are bound only to take reasonable and ordinary care of the goods deposited with them. Thus, they would not be liable for thefts, or for loss or injuries caused by rats, unless occasioned by their want of proper care, etc. Their liability commences as soon as the goods arrive and the crane of the warehouse is used to hoist them in, and it terminates the moment they leave his premises. The warehouseman's liability is usually fixed or limited by receipts which they give for the goods deposited, and which pass from hand to hand by assignment. See Warehousing.

Wharfingers.—A wharfinger is one who keeps a wharf for the purpose of receiving goods on hire. His responsibility is similar to that of a warehouseman.

BANKRUPTCY

Bankruptcy is a system of procedure for the administration of the affairs of insolvent debtors, or bankrupts, the distribution of their property among their creditors, and the discharge of the debtors from further accountability for their debts.

The National Bankruptcy Law, approved July 1, 1898, provides for a complete system of bankruptcy, to be uniform throughout the United States and administered by the United States courts.

Voluntary Bankruptcy.—Any person who owes debts, except a corporation, shall be entitled to the benefit of this act as a voluntary bankrupt.

Involuntary Bankrupts.—Any natural person (except a wage-earner or a person engaged chiefly in farming or the tillage of the soil), any unincorporated company, and any corporation engaged principally in manufacturing, trading, printing, publishing, or mercantile pursuits, owing debts to the amount of one thousand dollars or over, may be adjudged an involuntary bankrupt upon default or an impartial trial, and shall be subject to the provisions and entitled to the benefits of this act. Private bankers, but not national banks or banks incorporated under State or Territorial laws, may be adjudged involuntary bankrupts.

Acts of Bankruptcy.—The National Bankrupt Law defines an act of bankruptcy by a person to consist of his having conveyed, transferred, concealed, or removed, any part of his property, with intent to hinder, delay, or defraud his creditors, or any of them; or transferred, while insolvent, any portion of his property to one or more of his creditors, with intent to prefer such creditors over his other creditors; or suffered or permitted, while insolvent, any creditor to obtain a preference through legal proceedings and not having at least five days before a sale or final disposition of any property affected by such preference, vacated or discharged such preference; or made a general assignment for the benefit of his creditors; or, being insolvent applied for a Receiver or trustee for his property or because of insolvency a receiver or trustee has been put in charge of his property under the laws of a State, of a Territory, or of the United States; or admitted in writing his inability to pay his debts and his willingness to be adjudged a bankrupt on that ground.

Proceedings.—A bankrupt may of his own motion offer to surrender his property to the administration of the United States court and ask for his discharge in voluntary bankruptcy, or creditors may apply to the courts to compel a bankrupt to turn over his property to be administered under the act for the benefit of the creditors. A petition may be filed against a person who is insolvent and who has committed an act of bankruptcy, within four months after the commission of such act. Such time shall not expire until four months after the date of recording or registering of

the transfer or assignment, when the act consists in having made a transfer of any of his property with intent to hinder, delay or defraud his creditors or for the purpose of giving a preference or a general assignment for the benefit of creditors, if by law such recording or registering is required or permitted; or if it is not, from the date when the beneficiary takes notorious, exclusive or continuous possession of the property, unless the petitioning creditors have received actual notice of such transfer or assignment.

The Proceedings Once Inaugurated and the adjudication in bankruptcy having been made, the court proceeds to take charge of the bankrupt's property, and administer the same for the benefit of the creditors, and determine all questions which may arise in regard to the rights of the bankrupt or the creditors, either as against the bankrupt or as between themselves in accordance with the above-prescribed powers. A trustee is appointed, either selected by the creditors at a meeting called for that purpose or, in case they fail to select a trustee, one is appointed by the Court. His duty is to collect the property, realize on the same in such manner as may be for the best interests of all concerned, and ultimately distribute the same among the creditors in such proportions as they may be adjudicated to be entitled thereto.

Referees.—As all questions, both of law and fact, in relation to the property or the rights of the various parties must be decided in the bankruptcy proceeding, it is provided that referees be appointed, who are charged with the duty of hearing the allegations and testimony of all parties and deciding all such questions that may arise. Each case, as it comes up, is assigned to some referee, whose duty it is to adjudicate and pass upon all such questions arising therein in the first instance, the right being reserved to any parties to appeal from the decision of the referee to the United States District Court.

The Duties of the Referee are substantially of a judicial character, and he occupies much the position of a judge of primary resort, subject to an appeal to the Court, and is required to take the same oath of office as that prescribed for judges of the United States courts. By Section 38 of the act, the referee is invested with jurisdiction to consider all

petitions referred to him by the clerks, made adjudications or dismiss the petition; exercise the powers vested in courts of bankruptcy for the administering of oaths to and the examination of witnesses, and for requiring the production of documents in proceedings before him, except the power of commitment, and, in the absence of the Judge, to exercise all his powers for taking possession and releasing the property of a bankrupt, and to perform such part of the duties of the courts of bankruptcy as they may prescribe by rules and orders, excepting only questions arising on applications of bankrupts for compositions or discharges.

All questions in regard to the property or assets or rights of the creditors and persons interested come before the referee for hearing and determination, subject to the right of appeal. After the rights of all parties have been ascertained and determined, and the property has been realized upon, it is distributed among the creditors.

Notice to Creditors.—Detailed provisions are made in the act for giving notice to all creditors and other persons interested in the estate of the pendency of the proceedings, the payment and declaration of dividends and other matters, and providing methods whereby all parties interested may be heard on all subjects arising in the course of the proceedings.

Compromises.—Provision is made in the act for allowing bankrupts to compromise or settle with their creditors by a proceeding known as composition proceedings, whereby if a bankrupt and a majority in number and amount of his creditors agree upon some basis of settlement, the same, if approved by the Court, shall become binding upon all creditors. The decision of the question as to the approval of compositions and granting discharges to a bankrupt from his debts is specifically reserved by the act to the judges of the United States courts; but the Court, by virtue of its general powers, may refer such matters to the referee to take testimony and report to the Court his opinion thereon.

Defense.—It is made a complete defense to any proceedings in bankruptcy to allege and prove that the party proceeded against was not insolvent at the time of the filing of the petition against him.

Duties of Bankrupts.—The bankrupt shall (1) attend the first meeting of his creditors, if directed by the court or a judge thereof to do so, and the hearing upon his application for a discharge, if filed; (2) comply with all lawful orders of the court; (3) examine the correctness of all proofs of claims filed against his estate; (4) execute and deliver such papers as shall be ordered by the court; (5) execute to his trustee transfers of all his property in foreign countries; (6) immediately inform his trustee of any attempt, by his creditors or other persons, to evade the provisions of this act, coming to his knowledge; (7) in case of any person having to his knowledge proved a false claim against his estate, disclose that fact immediately to his trustee; (8) prepare, make oath to, and file in court within ten days, unless further time is granted, after the adjudication if an involuntary bankrupt, and with the petition if a voluntary bankrupt, a schedule of his property, showing the amount and kind of property, the location thereof, its money value in detail, and a list of his creditors, showing their residences, if known (if unknown that fact to be stated), the amount due each of them, the consideration thereof, the security held by them, if any, and a claim for such exemptions as he may be entitled to, all in triplicate, one copy of each for the clerk, one for the referee, and one for the trustee; and (9) when present at the first meeting of his creditors, and at such other times as the court shall order, submit to an examination concerning the conducting of his business, the cause of his bankruptcy, his dealings with his creditors and other persons, the amount, kind, and whereabouts of his property, and, in addition, all matters which may affect the administration and settlement of his estate; but no testimony given by him shall be offered in evidence against him in any criminal proceedings.

Provided, however, that he shall not be required to attend a meeting of his creditors, or at or for an examination at a place more than one hundred and fifty miles distant from his home or principal place of business, or to examine claims except when presented to him, unless ordered by the court, or a judge thereof, for cause shown, and the bankrupt shall be paid his actual expenses from the estate when examined

or required to attend at any place other than the city, town, or village of his residence.

Costs.—The aim of the act has been to make the expense of the proceedings depend largely upon the amount of the property involved, and the compensation of the referees is fixed substantially at 1 per cent on the amount distributed to the creditors in ordinary cases, where the assets are distributed by the Court, and one-half of 1 per cent in composition cases, and the trustees who have charge of the actual management of the bankrupt's property receive as compensation such commissions on amounts paid out by them as dividends as the court may allow not to exceed, however, six per cent on the first $500 or up; four per cent up to $1,500, above $1,500 to $10,000 two per cent and 1 per cent on all sums in excess of $10,000.

Discharge of Debtor.—Any person may, after the expiration of one month and within the next twelve months subsequent to being adjudged a bankrupt, file an application for a discharge, or if it shall be made to appear that the bankrupt was unavoidably prevented from filing such application within said time, it may be filed within the next six months.. The judge shall hear the application for discharge, and all such pleas and proofs as may be made in opposition thereto. Applicants are to be discharged unless they have committed offenses punishable by imprisonment, as provided in the act, or with intent to conceal their financial condition, destroyed, concealed or failed to keep books of account or records from which such condition might be ascertained, or obtained property on credit from any person upon a materially false statement in writing made to such person for the purpose of obtaining such property on credit; or at any time subsequent to the first day of the four months immediately preceding the filing of the petition, transferred, removed, destroyed, or concealed, or permitted to be removed destroyed or concealed any of his property with intent to hinder, delay or defraud his creditors; or in voluntary proceedings, has been granted a discharge in bankruptcy within six years; or in the course of the proceedings in bankruptcy refused to obey any lawful order of or to answer any material question approved by the Court.

The confirmation of a composition shall discharge the bankrupt from his debts, other than those agreed to be paid by the terms of the composition, and those not affected by a discharge.

Discharges may be revoked on the ground of fraud.

Liability of Co-Debtor or Surety.—The liability of a person who is a co-debtor with, or guarantor, or in any manner a surety for a bankrupt, shall not be altered by the discharge of such bankrupt.

Effect of Discharge.—A discharge in bankruptcy shall release a bankrupt from all his provable debts, except such as are due as a tax levied by the United States, the State, county, district, or municipality in which he resides; liabilities for obtaining property by false pretenses or false representations, or for willful and malicious injuries to the person or property of another, alimony, seduction, criminal conversation; debts which have not been duly scheduled in time for proof and allowance, with the name of the creditor, if known to the bankrupt, unless such creditor had notice or actual knowledge of the proceedings in bankruptcy; or debts which were created by his fraud, embezzlement, misappropriation, or defalcation, while acting as an officer or in any fiduciary relation or capacity.

BONDS

A Bond is an instrument in writing whereby one person binds himself (or several persons bind themselves) to another or others to pay a sum of money, to abide by an award, or to do some lawful act, or not to do some particular thing or things specified in the condition of the bond.

Names of Parties.—The person who gives the bond and so binds himself is called the obligor, the person receiving the bond is called the obligee.

Kinds of Bonds.—If there is no stipulation in the bond that the obligor shall suffer any penalty in case of nonperformance, the bond is called a simple one. But there generally is a condition added that if the obligor does some particular act, the obligation shall be void, or else shall remain in full force, as payment of rent, performance of covenant in a deed, or repayment of a principal sum of money

borrowed of the obligee, with interest; which principal sum usually is one-half of the penal sum specified in the bond.

Seal Required.—Bonds, at common law, must be under seal, the seal making proof of consideration unnecessary.

Forfeiture.—In case of a failure to perform the condition, the obligee can recover only his principal, interest, and expenses, if the bond was given to secure the payment of money; and if given to secure the performance of a covenant, he can recover only reasonable damages for the breach.

Action On.—Bonds belong to the class of obligations known as specialties, and like other sealed instruments, are in force by statute in most of the States for twenty years, or during such time as the special statute of the State may provide.

Form of Simple Bond

Know all Men by These Presents, That I, William Jenkins, of the city of Dallas, State of Texas, am held and firmly bound unto James Stevens, of the city and State aforesaid, in the sum of Five Hundred Dollars, lawful money of the United States, to be paid to the said James Stevens, or his assigns; to which payment, well and truly to be made on or before the first day of May, 19.., I bind myself, my heirs, executors, and administrators, firmly by these presents.

In Testimony Whereof, I, William Jenkins, have set my hand and seal to this instrument on the first day of March, in the year of our Lord one thousand nine hundred and .....

Executed and delivered in presence of WILLIAM JENKINS. [SEAL]
WILLIAM RODGERS
LOUIS WOODS.

General form of Bond, with Condition

Know all Men by These Presents, That I, John Taylor, of Lincoln, in the county of Logan, State of Illinois, am firmly bound unto Harvey Newman, of the place aforesaid, in the sum of One Thousand Dollars, to be paid to the said John Taylor, or his legal representatives; to which payment, to be made, I bind myself, my heirs, executors, and administrators firmly by these presents.

Sealed with my seal. Dated the fifth day of June, A. D. 19...

The condition of the above obligation is such that, if the above bounden John Taylor, his heirs, executors, or administrators, shall promptly pay the sum of Five Hundred Dollars in two equal annual payments from the date hereof, with annual interest, then the above obligation to be of no effect; otherwise to be in full force and valid.

JOHN TAYLOR. [SEAL]

Signed, sealed, and delivered in presence of
RICHARD LOW.

Bond to a Corporation

Know all Men by These Presents, That I, Chas. Green, of Terre Haute, Vigo County, State of Indiana, am firmly bound to the Terre Haute Plow Manufacturing Company in the sum of Ten Thousand Dollars, to be paid to the said company, or their assigns, for which payment, to be made, I bind myself and representatives firmly by these presents. Sealed with my seal. Dated this third day of June, 19... The condition of the above bond is such that, if I, the said Chas. Greene, or my legal representatives, shall pay unto the Terre Haute Plow Manufacturing Company, or assigns, Five Thousand Dollars in two equal payments, viz.: Two Thousand Five Hundred Dollars March 1st, 19.., and Two Thousand Five Hundred Dollars July 1st, 19.., then the above to be void; otherwise to remain in full force and effect.

CHAS. GREENE. [SEAL]

Signed, sealed and delivered in presence of
FRED BROWN.

Bond of Indemnity

Know all Men by These Presents, That I, Phillip Barrows, of Richmond, Virginia, am held and firmly bound unto Warren Hazelteen, of the same place, in the sum of Two Thousand Dollars, to be paid to the said Warren Hazelteen, his executors, or administrators, for which payment, well and truly to be made, I do bind myself, my heirs, executors, and administrators firmly by these presents.

Sealed with my seal. Dated this 10th day of February, 19...

Whereas, Warren Hazelteen is about to employ my nephew, Harry R. Hall, as cashier in his store, for the term of one year from March 1st, 19...

Now the condition of this obligation is such that if the said Harry R. Hall shall fully perform all the duties of his said employment, and promptly and correctly account for and pay over all the money or property of the said Warren Hazelteen which may come into his hands during its course, then this obligation shall be void; otherwise to remain in full force.

PHILLIP BARROWS. [SEAL]

Signed, sealed and delivered in presence of
HIRAM JONES,
WILLIAM SMITH.

BROKERS

A Broker is an agent who is employed to transact business for others. His province is to find buyers and sellers and bring them together to make their bargains, or to transact for them the business of such buying and selling. In law, he is regarded as a middleman, or intermediate negotiator between the principals on both sides of the negotiation conducted by him.

Classes of Brokers.—Brokers are divided into different

classes, according to the nature of the property in which they deal.

Bill and Note Brokers are those who buy and sell for others drafts, bills of exchange, and notes.

Exchange Brokers buy and sell uncurrent money, and deal in exchanges relating to money in different countries.

Insurance Brokers act for the owners of property in obtaining insurance upon it, settling losses, etc.

Merchandise Brokers buy and sell property, known as merchandise, for others.

Pawnbrokers, though called brokers, are really principals.

Real Estate Brokers buy and sell real estate or mortgages on real estate for others.

Shipping Brokers deal with the purchase and sale of vessels, procure freights, etc.

Stock Brokers buy and sell for others the stock and bonds of railroads, etc.

MERCHANDISE BROKER'S FORMS

Memorandum to be Given to the Seller

New York, December 10, 19...

MESSRS. WHITE, LUDLOW & CO.,
41 Broadway.

We have sold today on your account to William Holsworth, 450 22d St., the following goods: 1,000 ounces Sulphate of Quinine B. and G. at $2.75 per ounce.

Respectfully,
MERRIAM & CHAPIN, Brokers.

Memorandum to be Given to the Buyer

New York, December 10, 19...

MR. WILLIAM HOLSWORTH,
450, 22d St.

We have today for your account, from White, Ludlow & Co., the following: 1,000 ounces Sulphate of Quinine B. and G. at $2.75 per ounce.

Respectfully,
MERRIAM & CHAPIN, Brokers.

COMMISSION MERCHANTS

A Commission Merchant is one to whom goods are sent for sale, and who charges a certain per cent on the price of the goods sold for his service, which is called commission.

Farmers and manufacturers who have large quantities of goods to sell send them to the cities to the commission merchant, who sells them for them.

Commission merchants, are, therefore, agents to sell and the owners of the goods are their principals. These duties and responsibilities are in general like those of other agents.

Duties.—The whole business is one of contract for personal services. The merchant's chief aim is to sell the goods for the best price he can get, and pay over the money when collected, after he has deducted his commission. He must obey the orders of his principal, conduct the business skillfully and carefully, and render true accounts when called upon. He must not make his own interests adverse to those of his principal.

Authority.—This is as conferred upon him by special agreement, but often the commission merchant is left to conduct the business according to his own judgment and in the way such business is usually conducted.

Responsibility to Principal.—If he violates in any way the agreement, disobeys instructions, or is negligent, then he is responsible to his principal for any loss that may result from it.

When left to exercise his own judgment, he is not responsible for any loss that may result from making a mistake.

If he be given authority to sell on credit, and the buyer fails to pay, the owner must lose, not the commission merchant.

The Commission.—To this he is entitled when he has performed his service. When selling on credit, he is entitled to his commission when the sale is effected, whether the principal gets his pay or not.

But if in any way he breaks his contract, he loses his claim to any commission on that transaction.

Guaranty Commission.—Sometimes the commission is, by agreement, made to guarantee payment by the party to whom the goods are sold. In such cases he is responsible to the owner if the buyer does not pay.

Advances.—Frequently the commission merchant advances to the owner, before he has made any sales, some portion of what he thinks the goods are worth.

When the sale is made he deducts this amount, with his commission, from what he realizes from the sale.

Lien upon Goods.—His principal can revoke his authority and take his goods away at any time, but if the mer-

chant has in the meantime incurred any expense he can hold the goods until his expenses or outlays are made good.

The rule in law is: A commission merchant has a right to keep any goods of his principal's which are in his hand until he has been paid all commission, advances and expenses due him from the owner.

By this general lien he can keep any goods, whether the debt arose in connection with them or with others.

Relation to the Buyer.—If the owner of the goods is made known to the buyer, then the commission merchant assumes in general no responsibility himself, but if he says nothing about who owns the goods, or sells them as his own, acting as principal, he assumes all the responsibility of the principal.

CORPORATIONS

A Corporation is a body created by law, composed of individuals united under a common name, invested with certain powers and functions, and perpetuated by a succession of members, so that the body continues the same notwithstanding the change of the individuals who compose it.

How Created.—Corporations are created by special charter of the legislature, or formed by voluntary association of members under a general law. The necessary forms for organizing a corporation under the laws of the different States are usually to be had on application to the Secretary of State, and serve as a guide to the proper steps to be taken to effect an incorporation.

The Charter is the instrument embodying the rights and privileges granted to the incorporated body.

The Capital Stock represents the net capital of the corporation.

A Share is one of the equal parts into which the stock or capital is divided.

Stockholders are the owners of one or more shares of stock.

A Certificate of Stock is a written statement setting forth the number and value of the shares to which the holder is entitled.

The Par Value of stock is the amount named as each share; it is also called the nominal value.

The Market Value is the sum for which shares will sell. They are said to be at par when they sell at their nominal value, above par, or at a premium, when they sell for more, and below par when they sell for less than nominal value.

The Premium or Discount on stock is computed at a certain per cent on the original nominal value of the shares.

Preferred Stock is often given for cash for property or to secure some obligation of the corporation and takes preference of the ordinary or common stock either as to dividends or principal (in case of liquidation) or both, and the holders are usually entitled to a fixed per cent of the earnings out of the corporation before a dividend can be declared on the common stock.

Dividends are the declared shares of the profits due to stockholders after all expenses have been paid.

How Corporations Act.—A corporation acts through its officers or authorized agents. Its business must be done in its corporate name and in harmony with its charter.

Seal.—Every corporation is required to have what is called a corporate seal, which usually consists of an engraved stamp bearing some device or inscription identifying the corporation, and an impression of this seal is required to be attached to certain written instruments executed by the corporation. Its use is not necessary in ordinary business transactions, but only in the execution of solemn instruments, such as deeds, bonds, mortgages, etc.

Liability.—Corporations are liable for contracts made by their duly authorized agent within the scope of his authority, as well as for trespasses or torts committed by such agent under authority of such corporation.

The stockholders may be individually liable to the corporation's creditors to extent fixed by statute under which the company is incorporated. Usually they are not made liable beyond the amount of stock held by them.

Suits By and Against.—A corporation may be plaintiff or defendant in a suit at law or in equity. The notice or summons is served upon such of the executive officers as the law may prescribe.

Guaranteed Stock is stock upon which a certain dividend is guaranteed.

Watered Stock is stock issued to shareholders without any increase of the actual capital of the corporation. Sometimes the charter of a corporation forbids the declaring of a dividend exceeding a certain per cent of the par value of the stock. In this case the directors may find it desirable to "water" the stock, that is, issue additional shares. This increase in the number of shares of course reduces the percentage of dividend, although the same profit, in the aggregate, is secured to the stockholders.

Corporations of One State may do Business in Another.—As a general rule corporations organized under the laws of one State are privileged to do business in other States, and this fact is taken advantage of by persons who desire to organize with a small paid up capital and wish to do business in a State that requires a large proportion of the capital to be paid up. For instance, a company can organize in Maine for $100,000 on a paid up capital of $25 and do business in a State that requires a large proportion of the capital stock of corporations organized therein to be paid up. This is why many corporations doing business in the large cities of New York, etc., are organized under the laws of New Jersey.

Dissolution of Corporations.—Corporations are in theory immortal, but practically they can be terminated in various ways. If a corporation violates its charter, it loses the right to continue its existence. It may also be terminated by an act of the legislature when the law that created it has reserved the right to dissolve or to abolish it. A corporation limited as to time is of course dissolved at the expiration of such time. By statute in some states corporations are or may be dissolved upon failure to pay dues to the State.

When dissolved, the debts of the corporation must be paid out of the assets, and what remains beyond that is divided among the stockholders.

The Stock Exchange is a place where "stocks," or in other words, securities of governments, railroads and other corporations, are bought and sold. The London and New York stock exchanges are the chief associations of their kind in the world.

Stock exchanges perform a number of useful functions,

only a few of which can be indicated here. The body of dealers find it convenient, if not necessary, to have a place where they may meet to transact business among themselves. Here they have the advantage of the latest intelligence, of the exchanges themselves, from all the leading associations of the same kind throughout the world. The result is that, owing to the keen competition of the buyers and sellers, prices are promptly adjusted to existing conditions of supply and demand, and excessive and ruinous fluctuations in the prices of securities are thus obviated. The declaration of a good or bad dividend on mining or railroad shares, the report of an increase or decrease in the output or traffic in the concern often brings about an undue exaltation or depreciation in the market value of its securities. The stockbroker or dealer in the case of an undue confidence sells his shares freely, and thus arrests the rise. In case of an irrational panic he buys largely and thus arrests a fall.

The original cost of a seat in the New York Stock Exchange was $400. Prices now range from $90,000 to $100,000 per seat.

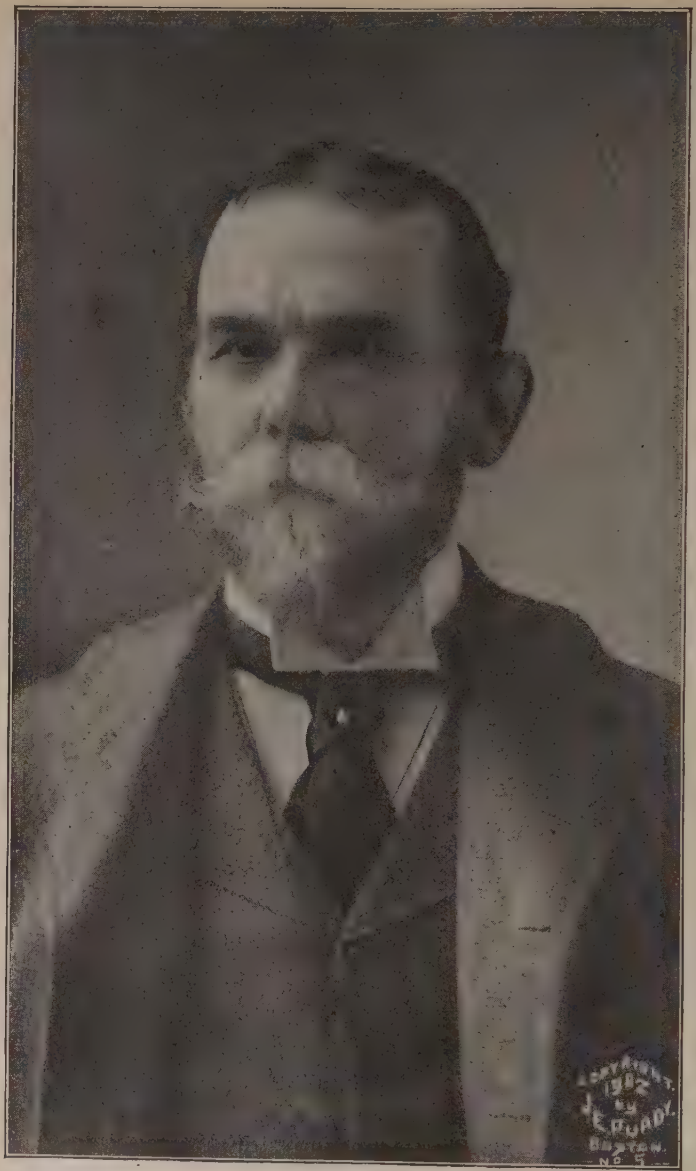
Trusts.—A trust, strictly speaking, is an organization for the control of several corporations under one direction, usually effected by the device of a transfer, by the stockholders in each of the corporations concerned, of at least a majority of the stock to a central committee, or board of trustees, which issues in return, to such stockholders, respectively, certificates showing in effect that although they have parted with their stock and the consequent voting power, they are still entitled to dividends, or to their share in the profits.

The word "trust," however, has come to have a much broader application, and as now commonly understood means "any consolidation, combine, pool, or agreement of two or more competing concerns, which establishes a limited monopoly, with power to fix prices or rates in any industry or group of industries."

National and State laws have recently been passed making some of the more objectionable forms of trusts unlawful and subjecting the others to State supervision and control.

PART VI

Wills, Taxes, How to Collect Debts, Public Schools, etc.



1838 **JOHN HAY** 1905

The man who gave up an annual law practice of $100,000 to serve his country

Famous Secretary of State, Lawyer, Statesman and Diplomat

WILLS

RULES FOR WRITING A WILL.

A will is a legal statement of the disposition a person wishes to have made of his property after his death.

The person making the will, if a man, is called a testator; if a woman, testatrix. An executor is one appointed by the will to carry out its provisions and settle the estate. The feminine form of the word is executrix. An administrator is a person appointed by the proper court to settle the estate when there is no will.

How a Will Should be Drawn.—No exact form of words is required to make a will good at law; the provisions of a will should, however, be stated so plainly that its language may not be misunderstood, and care should be taken to comply with the provisions of the statute of the State where the will is made as regards attestation and execution.

The name and residence of the testator should be distinctly stated at the beginning of a will and may be followed by the words, "Being of lawful age."

Disposition of Real Estate.—When there are different parcels of real estate going to different persons, they should be sufficiently described to identify and distinguish them; but where it all goes to one person a general devise, as "I bequeath all my real estate to ——," is admissible.

Personal Property bequeathed should be so described as to render identification practicable but there may be a general bequest of all testator's presonal property made in general language.

Real Estate located in another State must be devised in accordance with the laws of that Sate, but personally is bequeathed in accordance with the laws of that State wherein the testator was resident.

Witnesses.—Great care should be exercised in the selection of witnesses. They should, if possible, be acquainted with the testator and thoroughly understand his mental condition at the time when he executed the will.

A person having a beneficial interest in the will should not be a witness. In many states the executor may be a witness to a will if he have no beneficial interest therein.

Subscribing witnesses are not necessary in Pennsylvania except to a will making charitable bequests or devises, in which event the will must be executed thirty days before the death of the testator, and in the presence of two disinterested and subscribing witnesses.

A wife should not witness the will of her husband or husband that of his wife.

The residence of the witness should be placed opposite his name.

A devise or bequest given in a will to a subscribing witness or to the husband or wife of such witness is void in Connecticut unless the will is otherwise legally attested or the devisee or legatee is an heir of the testator. The competency of the witness, however, is not affected.

The number of witnesses required varies in different states. The witnesses should sign in the actual presence of the testator and where he can see them sign. Minors and married women, if otherwise competent, may be witnesses.

Laws Governing Wills.

1. All persons of sound mind, of lawful age and such as can freely exercise their own will, may dispose of their property by making a will. In some States married women cannot make a will without the consent of their husbands.

2. A will is not of force until after the death of the testator.

3. The testator can cancel or modify his will at any time but not by altering the original instrument.

4. The last will annuls all former wills unless it is only an addition to them.

5. Marriage generally operates as a revocation of a will made before marriage unless the will is made in contemplation of marriage and sometimes even then.

6. A will made by an unmarried woman is legally revoked by her subsequent marriage unless she takes such legal steps before her marriage as will enable her to dispose of her property afterwards as she sees fit, which, in some states, she can do.

7. A will should first provide for the payment of all just debts and funeral expenses, though this provision is not essential in many states.

8. If there be a general direction to pay debts then in some

states property bequeathed, if encumbered with debts, must first be cleared of debt before distribution is made to the beneficiaries unless the will shows other intent of testator.

9. A corporation may receive property bequeathed to it if provison is made for it in its charter or by statute for accepting such gifts.

10. In most of the States the husband cannot entirely disinherit his wife, but she can claim her dower, i. e., the use and income of one-third his real estate, or some equivalent right given to her by statute and often including a share in the personal property as well as in the real estate, in spite of the provisions of the will, unless by some voluntary act she has deprived herself of the right to make such claim. An additional bequest can be made to her by the husband. Statutes govern this matter in most states and the laws vary exceedingly in different states.

11. A husband can will his wife a certain amount in lieu (in place) of her dower, stating it to be so intended; this, however, does not deprive her of her dower, provided she prefers it to the bequest.

12. If a married woman possesses property, and dies without a will, her husband is entitled to administer upon such property in preference to any one else. Also in some states the widow is first entitled to administer; in others, the next of kin.

13. Any bequest of property made to a subscribing witness is invalid, although the integrity of the will is otherwise not affected thereby. In some states, however, if the will can be proved without the testimony of such witness his bequest is valid. In some states the bequests to an heir who is witness may be valid.

14. The testator's full name should always be written at the end of the will. If he cannot write, he must make his mark, having his hand guided by another person. Such mark, if he is conscious of what he is doing, renders the will valid.

15. It is always best if the testator appoints some suitable person or persons to act as executor.

16. An executor may always erect a suitable tombstone and charge the expenses to the estate if no other provision has been made and the estate is solvent.

17. If there is no executor named in the will or the named

executor declines to serve an administrator will be appointed by the court to settle the estate.

18. A person appointed executor is not obliged to serve, but may renounce his appointment by a legal notice, which in some States is required to be signed before two witnesses, which fact must be recorded by the same court before whom the will has been proved.

19. The will should be presented for probate as soon as possible after the death of the testator. Any person having custody of a will who fails to present it for probate is in many states subject to criminal prosecution.

Codicils.

A written addition made to a will is called a codicil and is executed like a will. It is designed to explain, modify, or change former bequests made in the body of the will. It must be executed with equal care as the will itself.

Revocation.—A will may be revoked by an actual destruction or obliteration of the document, or by the making of a new will of later date.

Marriage and the birth of a child after the execution of a will revoked it at common law, and this rule has much force in the United States now, although it is variously modified by statute in the different States. If a man makes a will and subsequently marries, he should be careful to make a new will as soon as possible. And in the event of after born child or children the will should be republished or a new will made.

Probate.—No will is effectual to pass either real or personal estate unless it has been duly proved and allowed in the probate court. The attesting witnesses must all, if possible, be produced, at least in case of a contest. In some States only one witness is required to be produced if there is no contest. If any are dead, or have left the State, proof of their handwriting may be required.

So long as the probate remains unreversed on appeal, the due execution of the will, the sanity or capacity of the testator, and the attestation of the witnesses, cannot be called in question in the courts of common law, except in statutory proceedings in some states to determine the validity of the will.

A codicil requires the same number of witnesses as the will.

Form of Will

I, JOHN R. BAKER, of the city of Freeport, in the county of Stephenson, and State of Illinois, being of sound mind, memory, and understanding, do make my last will and testament in manner and form following:

First. I give, devise and bequeath to my wife, Anna, her heirs and assigns forever, one-half of all my property, real, personal and mixed of what nature and kind soever and wheresoever, the same shall be at the time of my death; the same to be in lieu of her dower at common law.

Second. I give, devise and bequeath unto such of my children, as may be living at the time of my death, one-half of all my property, real, personal and mixed, of what nature and kind, soever and wheresoever, the same shall be at the time of my death, to be divided among them there, share and share alike.

Third. I hereby direct and empower my executor to sell and dispose of all my personal property to the highest bidder at auction, as soon as practicable after my death, and to sell my real estate at auction or private, as it may in his judgment seem most advantageous, or for the interest of my said devisees.

Fourth. I hereby appoint my wife, Anna, guardian of the person and estate of such of my children as may be minors at the time of my death.

Fifth. I hereby appoint JOSEPH M. BAKER executor of this my last will and testament.

IN WITNESS WHEREOF, I, JOHN R. BAKER, the testator, have to this, my last will and testament, set my hand and my seal, this eleventh day of July, A. D. 19...

Signed, sealed, published and declared by the above named JOHN R. BAKER, as and for his last will and testament, in the presence of us, who have hereunto subscribed our names at his request, as witnesses thereto, in presence of the said testator and of each other.

ALBERT B. MILLER,
Freeport, Ill.
DAVID SMITH,
Freeport, Ill.
WILLIAM BROWN,
Freeport, Ill.

JOHN R. BAKER. ..... : SEAL : .....

Codicil to the Above Will

WHEREAS, I, JOHN R. BAKER, did on the eleventh day of July, one thousand nine hundred and ..., make my last will and testament, I do now by this writing add this codicil to my said will, to be taken as part thereof.

WHEREAS, by the dispensation of Providence, my son William has died on the third day of August, 19... I give and bequeath unto my nephew, Charles S. Brown, the share of one-half of all my property,

real, personal, and mixed of what nature soever and wherever at the time of my death, that would have fallen as his share to my son William, if he had lived, as bequeathed in the body of this will.

IN WITNESS WHEREOF, I hereunto place my hand and seal, this first day of September, one thousand, nine hundred and .....

Signed, sealed, published and declared to us by the testator, JOHN R. BAKER, as and for a codicil to be annexed to his last will and testament. And we, at his request, and in his presence, and in the presence of each other, have subscribed our names as witnesses thereto, at the date thereof.
EDWARD J. BRADFORD, Freeport, Ill.
DANIEL F. JOHNSON, Freeport, Ill.
JOHN F. WILSON, Freeport, Ill.

JOHN R. BAKER. SEAL

Form of Will, Where Property is Left to the Wife Absolutely

This is the last will and testament of me, DAVID GOSS, made this eighteenth day of June, A. D. 19.., in Hamilton, County of Butler, and State of Ohio, as follows:

I bequeath all my lands, tenements and hereditaments, and all my household furniture, ready money, securities for money, money secured by life insurance, goods and chattels, and all other parts of my real and personal estate and effects whatsoever and wheresoever, unto my wife, Sophia Goss, her heirs, administrators and assigns, to and for her and their absolute use and benefit, according to the nature and quality thereof respectively, subject only to the payment of my just debts, funeral and testamentary expenses, and the charge of proving and registering this my will.

And I appoint my said wife executrix of this my will, and thereby revoke all other wills.

IN WITNESS WHEREOF, I hereunto set my hand and seal, the day and year above mentioned.

Signed, sealed, published and acknowledged by the said DAVID GOSS, as and for his last will and testament, in the presence of us, who in his presence, and at his request, and in the presence of each other, have subscribed our names hereunto as witnesses thereof.
JOHN J. JONES,
Hamilton, Ohio.
WM. F. JOHNSON,
Hamilton, Ohio.
BENJAMIN LEE,
Hamilton, Ohio.

DAVID GOSS. SEAL

Note: Three witnesses necessary in many States, but a seal or scroll is not necessary in every State.

TAXES

Every government, whether of town, State or nation, is under the necessity and has the right to raise the necessary funds to carry on all the functions of the government.

Definition.—Tax is the sum of money which the government demands from the individual or from his property to pay for the benefit he receives from the government.

The government protects him in his rights, protects his property and often advances the value of the same by public improvement. It therefore has a right to levy a tax upon him and his property.

Kinds of Taxes.—Taxes are either direct or indirect.

Direct Taxes are those which are levied directly upon persons, propery, incomes, etc.

Indirect Taxes are such as are assessed on manufactures, imports, etc., as the customs tariff and most of the excise or internal revenue taxes.

Taxation in the United States ranges itself under the three heads of federal, State, and municipal.

Federal Taxation is laid almost wholly in the form of duties upon manufactured goods imported from foreign countries, and excise or internal revenue taxes laid on the manufacture and sale of liquors, cigars, etc., and collected in great part by means of stamps. In 1861 a tax was imposed on incomes over $800, and during its ten years' continuance realized for the government $365,000,000. An income tax was again imposed in 1894, but was declared to be unconstitutional by the U. S. Supreme Court.

State Taxation is laid upon property by a periodical valuation. In some States this is supplemented by taxes on occupations or "privileges," on franchises of corporations, on legacies, etc.

Municipal or local taxation is commonly very much heavier than State taxation. It embraces: (1) all taxes laid for the general purposes of counties, cities, boroughs, towns and villages and (2) those local taxes which are usually called assessments, and which are laid in special districts supposed to be peculiarly benefited by the construction of some public work, and by some rule of apportionment which proposes to

charge each item of property within the district in proportion to the benefit it will receive.

Poll Tax.—Some States levy tax upon all male citizens over twenty-one years of age, others upon all voters. This is called poll tax.

Property Tax.—Tax levied upon property, real or personal, is called property tax.

Valuation of Property.—The assessor of the town or city estimates the true value of every piece of taxable property, which is usually lower than the market value. It makes little difference whether the property's valuation is high or low, because the amount of tax to be raised is rated according to the valuation, but it is of importance to any individual taxpayer that the valuation of his property shall be neither higher nor lower than that of others.

In many States when county taxes are levied, there is a county board of assessors who receive the tax lists from the assessors of the several towns and cities within the county, and if necessary, in their judgment, they make such changes as justice seems to demand. To them an individual who believes himself overtaxed can within a certain time appeal for correction.

For the State tax, there is in many States a State Board of Equalization. This board receives the lists from all the counties and makes the necessary equitable adjustment of taxes throughout the State.

Levying Taxes.—The rate of taxation is determined as follows: Having placed the valuation upon all the property, there is fixed the amount of money to be raised by the town; from this sum the poll tax (where there is any) is subtracted. If this sum is divided by the total valuation of the property of the town the quotient is the rate of taxation; that is, the sum to be raised on each dollar of property.

The amount varies all the way from two mills on the dollar, or perhaps less, to twenty cents on each hundred dollars or two dollars on each thousand dollars of property. In large cities the rate of taxes is sometimes as much as 2 per cent or twenty dollars on a thousand, or even more.

Collection of Taxes.—In many States the town collector collects all the taxes for the town, county and State; in others the county collector collects of all the towns.

Penalties.—The law fixes the time of payment of taxes. If one neglects to make payment within the specified time a fine or penalty is added. If the person is still delinquent after a further specified time the property is sold at auction. The government then collects enough money to pay the taxes and expenses and gives a tax title to the purchaser of the property. The former owner has a specified time in which to redeem his property by payment of the tax and all the cost.

The Treasurer and Auditor.—The collector pays the money collected to the treasurer, whether town or county, and takes a receipt. The treasurer is required to give bond.

The auditor audits every bill presented for payment before the treasurer is pemitted by law to pay it. The treasurer's account must, therefore, correspond with the final account rendered by the auditor.

Exemptions.—Many States exempt the following property, viz.: Certain portions of one's personal property, such as tools and utensils of laborers, institutions of learning and charitable institutions, also churches and parsonages.

Real and Personal Property.—A very large part of the taxes must be collected from real estate. The tax from personal property includes all tax except that on lands, lots and buildings. The State tax in our country is usually much less than the town, city or county tax.

HOW TO COLLECT DEBTS

Pay as you go, or a strictly cash business, is the best and safest method of doing business. But certain conditions or customs in trade make this sometimes impractical or impossible, and credit must be given. Under this method dishonest, careless or unfortunate people contract debts, then refuse, neglect or are unable to pay them, and collections, peaceable or forced, become a necessity.

The requisite steps to collect such debts are a matter of great importance and should be understood by everybody, but they are not, and much unpleasantness and heavy losses are often the result.

Methods by Which Debts are Contracted

Goods are bought on credit, to be paid for at a definite or indefinite future time. Labor is employed, to be paid for at certain future periods. Lands, houses and other property are purchased under contract of future payment. Money is borrowed, under notes, mortgages or other securities, and many other transactions in business and trade call forth occasions or present temptations to contract debts.

Suggestions for Avoiding Debts

1. **Do a Strictly Cash Business.**—Better small profits and quick sales, than large profits and long credits.

Mark your goods as low as possible and adhere unswervingly to your cash principle. This is best for buyer and seller. It avoids collections and prevents losses. It saves the time and labor of keeping accounts. This enables the seller to sell cheaper and the buyer to buy for less than on credit.

2. **Cautions.**—Goods sent abroad should be paid for before the purchaser takes possession.

The time of credit should be as short as possible and the bills collected when due. When working for others collect your wages weekly or monthly, in accordance with the agreement to pay, unless your employer is quite responsible, thus making your dues safe.

In renting lands or houses, a duplicate lease should be made, one for each party, the rent paid promptly when due, at the house or business place of the landlord, and the payment credited on the back of the lease.

In receiving or making payments, a receipt should always be made out; it is a voucher and may save trouble.

Hotel and boarding-house keepers cannot be too prompt and strict in collecting their dues, as their customers are mostly transient, making forced collections sometimes impossible.

Never loan money without requiring a note or a duebill, if the amount is small; this is safest even between the most trusted friends.

When the loan is large, have the note secured by a mortgage on real estate; but see to it that the same is not en-

cumbered by previous claims which would render your security worthless. It is safest to require an abstract of title and then have your mortgage recorded immediately.

This precaution should also be observed where a chattel mortgage is taken on personal property.

If a small amount of money has been loaned without security, and it can apparently not be collected without legal process, it may be best to drop the matter and consider the loss as so much paid for a lesson in business prudence.

First Steps in Making Collections

These depend very much upon circumstances. The debtor may have met with reverses or a misfortune, rendering him unable to pay at the time specified, and deserving of patience; others may be careless and need a sharp reminder; a third party, inclined to be dishonest, may need close watching. Thus discretion is necessary as to the form and tone of the letters requesting payment. For letter forms illustrating the first efforts in making collections, see pages 51 and 52.

LEGAL STEPS IN COLLECTIONS

No other motive except the question "Will it pay" should induce a creditor to legally enforce payment. A mere feeling of retaliation or of getting satisfaction has no place in business.

Before resorting to the power of law it is well to ask the following questions:

1. Have all reasonable and peaceable efforts been made to induce the debtor to make payment?
2. Is the amount sufficient to warrant the expense involved in the legal process?
3. Has the debtor more property than the law allows him by way of exemption?
4. What does the law exempt? (See Exemption Table.)

When all peaceable means have been exhausted and the debt is not paid, it then becomes necessary to collect it, if possible, by legal process.

If satisfied that the debt can be collected, then the account should be placed in the hands of an attorney for collection.

This amount varies in different states, as shown by the following table:

Limit of Jurisdiction With Justice of the Peace

The following shows the largest amount in the different States and territories which the justice of the peace, through his official position, can have jurisdiction over:

Alabama $100	Louisiana $100	North Carolina. 200
Arizona 300	Maine (2) 20	Ohio $200
Arkansas 300	Maryland..... 100	Oregon 250
California 300	Massachusetts (3)	Pennsylvania .. 300
Colorado 300	 300	Rhode Island.. 100
Connecticut ... 100	Michigan 300	South Carolina 100
Dakota 100	Minnesota 100	Tennessee 1,000
Delaware 100	Mississippi ... 150	Texas 200
Florida 100	Missouri 250	Utah 300
Georgia 100	Montana 300	Vermont 200
Idaho 300	Nebraska 200	Virginia 100
Illinois 200	Nevada 300	Washington ... 300
Indiana 200	N. Hampshire.13.33	West Virginia. 300
Iowa (1) 100	New Jersey.... 200	Wisconsin 200
Kansas 300	N. Mexico Ter. 100	Wyoming 100
Kentucky 50	New York (4). 100	

(1) By consent of parties $300.
(2) See Maine Statute. N. H. Police Court $100.
(3) In Massachusetts Municipal Police and local District Courts have generally taken the place of the courts formerly held by Justices of the Peace. Their jurisdiction varies from $1,000 to $3,000.
(4) In New York in general $200. When the Amount comes within the jurisdiction of the Justice he issues a summons which the constable presents to the debtor, reading it to him if he can be found, which is called "serving the summons." Service is usually made by leaving a copy with debtor or by serving notice in some way prescribed by statute.

Form of Summons

The wording of this summons will be somewhat as follows:

STATE OF ———
——— County, } *ss.*

The People of the State of ——, to any Constable of Said County—

GREETING:

You are hereby commanded to summon L. M. to appear before me at —— on the —— day of ——, at —— o'clock —— M., to answer the complaint of R. L. for a failure to pay him a certain demand not exceeding ——, and hereof make due return, as the law directs. Given under my hand this —— day of ——, 19—.

JAMES WATTS,
Justice of the Peace.

The summons is served by a constable or sheriff or other officer empowered by law to do it.

The Judgment

If at the time set for trial both parties appear and are ready for the same, the justice proceeds with it and determines the matter in controversy. His determination is called the judg-

"The man who is in debt carries a world of trouble."—BURKE.

ment. The judgment can be rendered if the defendant does not appear at the trial.

Demanding a Jury

In many States, although not generally in the Eastern States, there are provisions for a jury trial before a justice

of the peace. In such States either party in a trial before a justice of the peace may demand a jury, and the justice is bound to grant the demand upon the deposit with him of the jury fees by the party making the demand. The jury may consist of either six or twelve men.

The Execution

The judgment being obtained, the plaintiff may now enforce payment. This process is called execution. It consists in a writ commanding the constable to seize sufficient of the property of the defendant, "which is not exempted by law," to satisfy the claim and costs and to sell the same and bring the money into the court to be paid to the plaintiff.

Attachment

Cases may arise where the legal process by summons, judgment and execution works too slowly, and the dishonest debtor may get away before payment can be enforced by the creditor; or the debtor may secrete, conceal, assign or remove the property beyond the reach of the law. To prevent such evasion the law provides a short process to get possession of property owned by him; this is called attachment.

How an Attachment is Obtained

In some States, notably the New England States, an attachment may be made as a matter of course without particular cause and without bond or affidavit, but in most of the States there must be some particular cause justifying the attachment.

The causes justifying an attachment are various; the creditor must affirm by oath that the debtor intends to defraud him by removing his property and departing beyond the reach of the law. In the affidavit is stated the amount of the debt, that the same is just, is due, unpaid, and giving one or more reasons why the attachment should be issued.

Usually the attachment is not issued until the debt is due, but in some States it is issued before, if it can be shown that the debt would probably be lost unless an attachment is secured at once. The law of attachment depends upon statutes and values in different states.

The Creditor's Bond.—In some States, in order to secure

the costs and the debtor against all damages in case the attachment is improperly issued the creditor securing the same must give a bond, usually double the amount claimed. Nonresident creditors may usually be held to give security for costs.

The Writ makes it the duty of the officer to at once seize sufficient property of the debtor to satisfy the claim (excepting such as is exempt from execution) and to hold the same until the plaintiff can get judgment and seize it upon execution. Property of the debtor in the hands of a third party may also be reached by appropriate proofs.

The Real Object of the Attachment is to hold sufficient property of the debtor to satisfy the debt until the creditor can get judgment. When the property has been seized the summons is served, and if the case is properly proved judgment is obtained in the ordinary way. After this the creditor takes out his execution, makes a levy upon the property attached, and out of the proceeds satisfies his debt.

Each State has its own attachment laws, and since officers of the law must be engaged to obtain the attachment there need be no difficulty in the details of the procedure.

Garnishment or Suing the Garnishee.—In the course of collection of debts it sometimes happens that while the defendant himself may have no property in his possession upon which an attachment can be made some other person may have in his possession property belonging to the debtor or may be indebted to him. In such cases the plaintiff can proceed against this third party, who is called the garnishee, or trustee, just as against the original debtor, although in some States a certain amount of money is exempt and cannot be garnisheed.

Attaching the Body

If under an attachment the officer returns "no property found," but the plaintiff is convinced that the defendant has property concealed, with the intention of defrauding him, and believes he is in danger of losing his claim unless the debtor is held to bail, several States empower the justice to issue a capias for the arrest of the debtor. A capias is issued usually only as a last resort, when it appears that the claim can only be collected by arresting the defendant.

Persons Who Cannot Be Arrested

The constitution of the United States prohibits the arrest of members of Congress and electors while on duty, except for treason, felony and breach of peace. In many States the militia, while attending musters or while on a journey; so also attorneys and counselors at law, judges, sheriffs, and all other officers of the several courts, also witnesses and other persons necessarily attending court are exempt from arrest except for felony, etc.

Real Estate Held for Debt

When under an execution no personal property can be found with which to pay the debt and it is known that the debtor possesses real estate enough to meet the claim, then certain States allow the justice to certify to the clerk of the circuit court a transcript of the judgment. This, when filed by the clerk, becomes a lien upon the real estate of the debtor. The court can then issue an execution and the property be sold for payment of the debt and costs.

In many states the attachment of real estate is made at the commencement of the suit and the statue governs subsequent proceedings.

Right to Appeal

If all legal steps have been properly taken in a trial before a justice or jury and the decision is that the debtor must pay the claim, he can, in many cases, then appeal to the next higher tribunal.

In many States before an appeal is allowed the defendant must give a bond, signed by one or more responsible persons, in a sum twice the amount of the claim, to cover the debt and all costs in case he is beaten. In some States the bond required is only to cover costs.

If the defendant loses his case also in this court then he can in many cases carry it to the supreme court of the State, where the matter generally ends, though the way in some cases remains open for him to appeal to the supreme court of the United States. A bond twice the amount of the debt and the costs accumulated by the successive trials up to this time is sometimes required before an appeal from one court to another is granted, as from the first.

When an Amount Beyond the Jurisdiction of a Justice is to be collected the case must be brought before the circuit court, district court, court of common pleas, or a court of similar character. There the clerk issues the summons, the sheriff or his deputy serves it and the case is usually tried before a jury of twelve men at the next term of Court.

The course of procedure varies in different states in all these particulars.

Delay in Forced Collections

Since the defendant can promptly defend his case and if beaten appeal to a higher court, he can thereby delay payment of the original debt for one or more years. But as each appeal increases the costs they soon become heavy and but few persons are able or willing to bear them. A debtor will generally pay the debt in the earlier part of the prosecution, unless he believes himself wronged or for other reasons refuses to do so.

Cost of Collections by Law

The first questions that should properly be asked, before resorting to or before submitting to collections by law, are: What will it cost? Will it pay? The actual cost cannot definitely but only approximately be foretold, and only in so far as the amount of the fees are fixed by law.

In some states the fee of the attorney for the plaintiff is assessed either in whole or part as a portion of the costs or judgment. In some states also when by the provisions of the instrument sued on, an attorney's commission or fee is to be collected as a portion of the debt, the same is assessed as part of the damages unless excessive or unreasonable.

If the amount and the intricacies of the case are such that it is thought best to employ a lawyer, his charges will probably range from ten to twenty dollars, or more in proportion to the magnitude of the claim.

If the plaintiff gains the case the debtor must pay all the costs. If the justice or jury decides against the plaintiff, declaring no cause for action, then the plaintiff must pay the cost of the suit.

The following fees of an ordinary suit may be taken as a fair sample of the practice in many of the States:

Docketing the suit	$ 0.25
Issuing summons	.25
Constable for serving summons	.35
Each mile traveled by constable in serving summons	.05
Justice fee for entering up judgment	25
For discharge of docket	.25
Fee of justice for hearing statement and giving decision.	2.00
Total	$ 3.40

These costs and fees vary in the different states and are fixed by Statute.

Witnesses are allowed 50 cents a day. Say two witnesses	$ 1.00
Justice for issuing subpœna of witnesses at 25 cents	.50
Constable for serving each subpœna at 25 cents	.50
Constable for mileage and administering oath to witnesses, about	.50
Total	$ 5.90
If tried by jury, each juryman is allowed 50 cents; 12 jurymen	$ 6.00
For entering verdict of jury	.15
Constable for waiting on jury	.50
Entering satisfaction of judgment	.10
Approximate cost of trial without attorney before a justice if settled there	12.65
If an attorney is employed, say fee	15.00
Total	$34.40
If debtor does not settle, fee for execution	.50
Fee of constable for serving and returning execution	.50
Advertising property for sale	.50
Commission on sales, not exceeding ten dollars, 10 per cent, if more 5 per cent; property sales say $50, commission	2.50
Total cost of legal process ending in execution	$38.40

Total cost of suit involving say a debt of $50.

If the case is settled without effecting the sale under execution, the cost connected with the execution is one-half of what is stated above. Add to this the time lost, to say nothing about the moral effect, and the question, "Will it pay?" is pretty well answered.

Exemption Laws of the Different States

Exemption laws are for the purpose of protecting those who are unable to pay their debts without causing distress to themselves and their families.

In many of the States debtors who desire to avail themselves in full of the provisions of the exemption laws are required to make a schedule of their personal property of every kind and character, including money on hand and debts due and owing to the debtor, and deliver the same to the officer serving the writ of execution. This schedule must be sworn to by the debtor.

In Pennsylvania the exemption laws may be waived, and waiver of exemption is generally made in all leases and judgment notes.

State.	Personal Property Exempt.	Homestead Exempt.
Alabama	$1,000	$2,000
Arizona	1,000	4,000
Arkansas	500	2,500
California		5,000
Colorado		2,000
Connecticut		1,000
Delaware	200	
D. of Columbia	300	
Florida	1,000	160 Acres.
Georgia	1,600	or 1,600
Idaho		5,000
Illinois	400	1,000
Indiana	600	or 600
Iowa	200	or 40 Acres.
Kansas		160 Acres.
Kentucky		1,000
Louisiana	Total, 2,000	
Maine		500
Maryland	100	
Massachusetts		800
Michigan	400	1,500
Minnesota	500	80 Acres.
Mississippi		2,000
Missouri	300	3,000
Montana		$2,500
Nebraska	500	2,000
Nevada		5,000
New Hampshire		500
New Jersey	200	1,000
New Mexico	500	1,000
New York	250	1,000
North Carolina	500	1,000
North Dakota	1,500	5,000
Ohio	100	1,000
Oregon		1,500
Pennsylvania	300	
Rhode Island	300	
South Carolina	500	1,000
South Dakota	750	5,000
Tennessee		1,000
Texas		5,000
Utah		1,500
Vermont	200	500
Virginia		2,000
Washington	500	2,000
West Virginia	200	1,000
Wisconsin	200	40 Acres.
Wyoming	500	1,500

NOTE.—In many of the States it is impossible to place a fixed amount on personal property exempt. In the table above these States have no amount given in the personal property column.

The Time in which Debts are Outlawed

1. It is found necessary in all commercial countries to fix a limit of time in which debts hold good. It would not tend to sound business practices or fairness for a creditor to be allowed unlimited time in which to enforce the collection of a debt.

2. Statutes of limitation have therefore been enacted, the period of time varying, there being no natural boundary line.

3. The range of time is from one year to twenty years.

4. In accounts it generally begins from the purchase of the last item, and is renewed by every partial payment.

5. In case the debtor makes a written acknowledgment in a note, or papers of that character, the claim is renewed.

For the statutes of limitation in force in the different States, see title, Interest Laws and Statutes of Limitation.

PUBLIC SCHOOLS

Laws Governing the Rights and Duties of Directors, Teachers, Pupils and Parents.

School Management.—In most of the States the management of the public or common schools is placed by statute under the exclusive control of directors, trustees, committees, or boards of education.

School Books and Course of Instruction.—Where the management has thus been placed under the exclusive control of the directors, they have the right to determine what books shall be used and what instruction shall be given in the schools, except as the same is governed by statute.

Separate Schools.—Where the legislature of a State confers upon boards of education the power to establish separate schools for white and colored children, this may be done without violating the fourteenth amendment to the constitution of the United States. And where under such statutory provisions appropriate schools for colored children

are maintained, such children may be lawfully excluded from schools established for white children.

In Pennsylvania, however, under mandamus proceedings, a negro who has been assigned to a school for colored children, was admitted to a school established for the separate instruction of white children.

But unless expressly conferred by statute upon boards of education, the power to establish separate schools does not exist.

The courts will compel the trustees to admit colored children to the public schools where separate schools are not provided for them.

Employment of Teachers.—By a statute in all the States the authority to employ teachers for the public schools is conferred upon school boards, directors, trustees, and committees.

Certificates of mental and moral qualifications are required of teachers in most of the States.

In some States these certificates are given by a board of examiners and in others by the county superintendent of schools.

Tenures and Salaries.—As a general rule teachers are employed for a year only at a time, but sometimes the teacher is first selected for one year, then, if reëlected, for two years, then for four, and so on. This is the practice in Cincinnati, Ohio.

Salary.—In many States the salary of a public school teacher is not attachable by trustee process while in the hands of officials whose duty it is to pay it, but in most New England States it is attachable.

Terminating Teachers' Contract.—School directors cannot terminate a contract with a teacher by doing away with the particular school in which he is engaged in teaching.

Dismissal of Teachers.—In the absence of agreement or statutory provision to the contrary, no teacher engaged for a certain term and holding a proper certificate can be dismissed without sufficient cause. Unfaithfulness, incompetency, and inability to properly govern the school, are held to be, either separately or combined, sufficient cause for dismissal.

If dismissed without sufficient cause, the teacher's remedy is the same as for breach of any other contract.

In many States there are statutory provisions giving more or less broad discretionary powers to the school board or other officials as to the dismissal of teachers. In Massachusetts this power seems to be absolute, to dismiss without assigning any cause, and the teacher cannot recover compensation for teaching thereafter.

Janitor Work cannot be required of a teacher, unless it is so specified in the contract.

Closing School.—When the school is closed by the district officers on account of the prevalence of a contagious disease, and the teacher stands ready to perform his contract, he is entitled to full salary during the time school is closed.

A Statute in Pennsylvania providing that a school shall remain open on legal holidays precludes payment of compensation for teaching on those days.

Legal Holidays.—It has been held by the courts that in the absence of statutory requisitions a school should be allowed the legal holidays without deduction of salary to the teachers.

Expulsion, Etc.—School directors may expel or suspend and teachers may suspend pupils for sufficient cause, as for breach of discipline, refusal to take part in exercises, refusal on part of the parents to sign and return periodical written reports of the pupil's standing, father's refusal to permit the teacher to whip the child or to correct him himself, refusal to study certain branches from which the parents of the child have requested that it might be excused, or misbehavior outside of the school tending to injure the school and subvert the teacher's authority.

Sometimes it has been held that, before the pupil can be expelled, he is entitled to a hearing if he asks for it.

Corporal Punishment.

The Teacher Stands in Place of the Parent, and while a pupil is under his care, has in the absence of statute or other regulation to the contrary, the same authority as the parent has at home of correcting him by confinement or whipping,

or at least such part of the parents' authority as is necessary to answer the purposes for which the teacher is employed.

Assaults by Teacher.—Although the teacher has a right to punish his pupils for misbehavior, he will be liable to prosecution for assault if he inflict such punishment as produces or threatens lasting mischief, or if he inflict punishment, not in the honest performance of duty, but under the pretext of duty to gratify malice.

Presumptions in Favor of Teacher.—The teacher has in his favor the presumption that he has done his duty, in addition to the general presumption of innocence, and in determining the reasonableness of the punishment, the judgment of the teacher as to what was required by the situation should have weight, as in the case of a parent under similar circumstances.

Pupils Over Twenty-one years of age who voluntarily attend school, thereby waive any privilege which their age confers, and may be punished as any other pupils.

Indecent Liberties taken by a schoolmaster with a female pupil, without her consent, though she does not resist, constitute an assault.

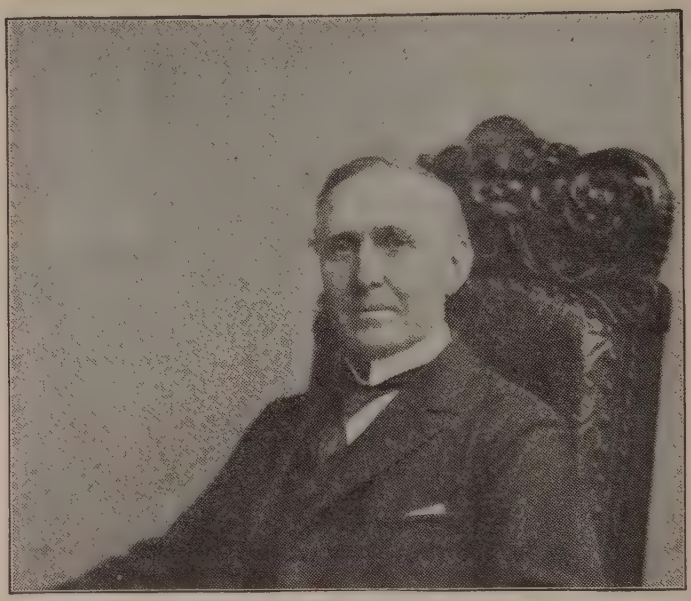
Parents Should Uphold the Teachers in maintaining school discipline, for upon this the welfare not only of the school but that of the pupils themselves depends. Where a teacher is sure of the parent's aid in the proper correcting of a child, corporal punishment at school is very seldom resorted to or required.

Value of Corporal Punishment.—The right and occasional necessity of corporal punishment being conceded, the question remains: Of what use is it?

"I am confident," says Addison, "that no boy who will not be allured by letters without blows, will ever be brought to anything with them."

The following incident may serve as an aid to the proper solution of the question:

"I dunno how 'tis, sir," said an old English laborer to his clergyman, in reply to a question respecting the bad behavior of his children, "I dunno how 'tis; I beats 'em till they're black and blue, and when they won't kneel down to pray I knocks 'em down, and yet they ain't good."



RUSSELL SAGE

STOCK JOBBING

The practice to which the term "stock jobbing" is more particularly applicable, is that of dealing in stocks or shares by persons who possess but little or no property in any of the funds, yet who contract for the sale or transfer of stock at some future period at a price agreed upon at the time. Such bargains are called *time bargains*, and this practice is *gambling* in every sense of the word.

Wall Street, in New York City, is the principal scene of stock jobbing in the United States. The New York Stock Exchange is the dominant feature of this locality. Here the prices of stocks and securities are determined, and here men become millionaires or paupers in a day.

Big Profits and Big Losses.—Stock jobbing is carried on to an amazing extent, and is of this character: A agrees to sell to

B $50,000 of bank stock, for instance, to be transferred in twenty days, for $60,000. Now if the price of bank stock on the day appointed for transfer should be only 118 per cent, he may then purchase as much as will enable him to fulfill his bargain for $59,000 and thereby gain $1,000 by the transaction. Should the price of bank stock, however, advance to 125 per cent, he will have to pay $62,500 for the necessary amount of stock and will thus lose $2,500 by completing his agreement.

Advice of an Experienced Financier.—Russell Sage, one of the most successful financiers in the United States, gives the following advice concerning Wall Street speculations:

"The fact cannot be too strongly impressed upon the minds of intending Wall Street speculators that for every dollar gained in Wall Street there is a dollar lost, and as the people who gain the dollars are always well-known old-timers in the business, it follows, clearly, that the people who lose the dollars are the new-comers. It often happens, too, that in an unguarded moment an old-timer is ruined in Wall Street; but it is always the other old-timers who benefit by his collapse—the new-comers do not figure in the deal.

" 'Experience' in Wall Street counts for nothing unless the experience of many years' duration, or is had as a friend of a certain clique.

"No doubt the man who goes into Wall Street speculation with a $1,000,000 capital may, with great prudence, be able to win $1,000,000 or $5,000,000 more after five or ten years. But he will lose from half to three-quarters of his original capital in acquiring the knowledge of the 'wire pulling' that will be necessary for him to be possessed of before he can begin to be making regular, permanent, steadily increasing gains. Exceptions have been extremely rare, and were the result of mere chance.

"As a rule, however, for a person with less than $25,000 or even $50,000 to go into Wall Street is sheer throwing away of money. I have seen thousands of men with capitals larger than that go down with the loss of every dollar. Some of them were men of exceptional shrewdness, too.

"I tried speculation, when, in 1874, I bought a seat in the Stock Exchange. But when I found out what the conditions were, I simply got out at the first opportunity.

"I do not wish to be drawn into any controversy in the matter, so will not particularize; but the person who is thinking of going into Wall Street speculation in the hope of making money

when he has learned what is popularly called 'the ropes' would do well to ponder what one writer has written on the subject:

" 'Some brokers of the Stock Exchange simply bid the figures to win their bets which they have made with their dupes—are running a "brace" game. Pretending to trade in stock, they delude the speculating public with the idea that they bid stocks up or down according to conditions of trade, war news, and so on. In reality, their only object is to bid the figures against the lambs on the floor who bring in the money of the lambs on the outside. In the nature of things, that could be their only object. The business not being a trading in actual stock, but simply betting on figures, the only object of the thimble-riggers on the floor is to bid the figures so as to win their bets. Several shysters, acting in collusion, pretend to trade furiously with one another, their bids in these "wash" sales "washing" a stock up or down.'

Life in Wall Street.—"The general public has an incorrect idea of the nature of the life of a Wall Street businss man. The speculators no doubt are compelled to live under conditions of unnatural excitement; but it is not so with the Wall Street operator who does not speculate—the man who buys stock with the object of improving its value, and retaining it. There is no more undue excitement in the life of a Wall Street business man than there is in the life of a wholesale dry goods dealer. The man who deals in money—that is what a Wall Street business man does—must be just as thorough a business man as the man who deals in merchandise.

"The wholesale grocer looks about the field before him, and discovers that by purchasing an agency in a certain section and spending some money in developing its resources he can make his general wealth so much larger; and so it is with all other dealers in merchandise. The Wall Street business man does not do differently. He simply examines the field before him, and his experience teaches him that if he buys out a lot of stock in a certain concern which is in great need of ready money, he can lend the money to that concern, and the result will be that the value of its shares will go up. Instead of selling this stock when it becomes valuable, as the public imagines he is always anxious to do, it is seldom that the Wall Street business man cares to part with it.

"**The Wall Street Speculator** differs from the Wall Street business man in this respect, in that after buying a certain stock he either cannot or does not do anything to make it more valuable except in the belief of the lambs by the bidding for it which he

prompts his agents to do. Then when he sells it at a higher figure the real truth of the matter is that the actual value of the stock has remained all the meanwhile in exactly the same place where the value was at the time the speculator originally purchased it. It is to persons such as the latter that fortunes are lost in Wall Street."

Bucket Shops are places which secure Stock Exchange quotations, or pretend to do so, and furnish persons of moderate means the same opportunities for gambling offered to wealthy speculators at the Exchange. Here anybody can gamble in futures by risking as small an amount as five or ten dollars, but his chances of winning out are about the same as if he had put up his money on a shell game or three card monte.

WAREHOUSING

Warehouses are divided generally into two distinct classes:
1. Bonded warehouses, under the control of the government.
2. Unbonded, or private warehouses.

Bonded Warehouses are buildings in which imported merchandise is stored until the importer makes entry for withdrawal for consumption and pays the duties, or until he withdraws the merchandise for reëxportation to a foreign country without paying the duties.

These warehouses are owned either by the government, or are private bonded warehouses, whose proprietors must obtain authority from the Secretary of the Treasury for receiving imported goods before the duties thereon are paid. Those owned by the government are under the entire control of the collector of the port, who assesses a charge at a fixed rate for the storage of goods, and this charge, with the import duty, becomes a lien upon them. The private bonded warehouses are required to be first-class, fire-proof buildings, and to be used for no other business, and they must be approved by the Secretary of the Treasury before receiving any merchandise. A government officer is placed in charge, at the expense of the owner, and the business is conducted under provisions and requirements established by the government. The officer of the customs detailed to take charge of a bonded warehouse, and under whose supervision bonded goods are received and delivered from the warehouse, is called a *bonded storekeeper*.

Lot.	Wh.	Sec.	Articles

SERIES O.

No. 3997

MONARCH REFRIGERATING COMPANY

239-241-243-245-247-249-251-253-255-257-259-261 MICHIGAN ST.

Chicago, _____ 190_

Received for storage from _____

_____

_____

Subject to _____ order hereon, on payment of all charges and the surrender of this receipt properly endorsed.

This Company will provide any desired temperature, but will not be responsible for results

It is agreed that all loss or damage to property occasioned by fire, water, leakage, vermin, ratage, breakage, frost, accidental or providential causes, riot or insurrection, or to perishable property is at owners risk. Loose fish, loose meats and any class of goods not properly packed at owners risk. Not responsible for shrinkage in weights.

Warehouse receipts must accompany delivery orders.

Storage per Contract _____

Net weight handed in _____

MONARCH REFRIGERATING COMPANY,

_____ SEC'Y. & TREAS. PRESIDENT.

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Form of Warehouse Receipt

Goods, wares and merchandise imported into the United States, subject to the payment of ad valorem duties, are required by law to be appraised at their "actual market value" in the foreign port at time of export. As it is frequently difficult to establish an actual market value in a foreign port, many goods being made only and expressly for foreign markets, and not sold nor offered for sale at the place of their manufacture or shipment, serious litigations often arise between the merchant and the government. This difficulty has led to the recognition by the commercial world of the distinctions, cash value, market value, and intrinsic value, although the laws name but one—the "actual market value."

In the United States the government warehouse system has been extended to other than imported goods. Thus spirituous liquors may be deposited in certain warehouses under the control of an internal revenue collector, and payment of the internal revenue taxes delayed until the liquors are withdrawn.

Unbonded Warehouses, or private storage houses, are common in all the large cities of the United States, and are mostly used for the storage of household goods. There are many, however, used exclusively for the storage of merchandise, some of which are known as cold-storage warehouses. In some States warehouses for the storage of grain, etc., are subject to State inspection and supervision.

The rates for storing bulky articles are usually fixed at so much per month, according to the amount of space occupied. The warehouseman is regarded as a bailee for hire, and must take ordinary care of the property placed in his custody.

Warehouse Receipts given by private warehouse companies are regarded as symbols of the property and pass from hand to hand by indorsement, or they may be used with banks, etc., as collateral security for money borrowed. In some States they are treated in all respects as negotiable instruments. There is usually a provision in the receipt that its transfer by indorsement and delivery shall be a conclusive transfer of the property. Where this is the case the receipt is an acknowledgment of the warehouseman that the goods are actually in store, and he becomes liable for their value even if no such goods as described in the receipt have been stored with him. In Pennsylvania they are so declared by statute.

TRADE AND COMMERCE

The Terms "trade" and "commerce," primarily, have the same meaning, only the latter is now generally restricted to the buying, selling, exchanging, etc., of commodities between different nations or States, while the former is applied indiscriminately to all commercial intercourse, whether domestic or international.

Trade is divided generally into two classes, *wholesale* and *retail*. Wholesale trade deals in goods by the piece or in large quantities, supplying retail dealers and middle men generally, while retail trade deals in small quantities and supplies goods directly to consumers.

The Wholesale Trade of a country is divided into four different kinds: the home trade, the import, or foreign trade of consumption, the export trade, and the carrying trade.

The Home Trade is employed in purchasing in one part of the same country and selling in another the produce of the industry of the country, and it comprehends both the inland and coasting, or that which is carried on both by land and sea.

The Import Trade is employed in purchasing foreign goods for home consumption.

The Export Trade is employed in connection with goods and produce sent to foreign markets.

The Carrying Trade is employed in transacting the commerce of foreign countries, or in carrying the surplus produce of one to another.

Commerce distributes the gifts of nature, balancing the deficiencies of one country with what is superfluous in another, creates a demand for labor, finds employment for wealth, and multiplies and cheapens the productions of every country.

Exports and Imports.—A quarter of a century ago the United States ranked fourth among the commercial nations of the world. To-day it stands first in the value of its exports. In a single fiscal year—that which ended June 30, 1898—the exports of the United States increased by a figure which represents a greater increase than that of England in twenty-five years. In 1800 the total value of exports of the United States was $70,971,780, and in 1903 it had increased to $1,420,141,679, which is over $40,000,000 greater than the total value of exports of Great Britain for the same year.

Foreign Carrying Trade.—During the year 1903 the shipping in the foreign carrying trade that was entered and cleared at the

various ports of the United States aggregated 62,409,831 tons.

Inland Carrying Trade.—In its railway commercial facilities the United States is preëminent. The total railway mileage of the world is 505,963, of which the United States possesses 180,657. This is 5,657 miles greater than the aggregate mileage of European railways.

Manufactures.—These unrivaled facilities for transportation have induced a marvelous growth of manufactures in the United States for consumption in all parts of the world. In 1870 the manufactures of the United States just about equaled those of Great Britain, while to-day they are two and a half times as great as the total value of British manufactures, and equal to those of Great Britain, Germany and France put together.

Customs Duties.—The taxes levied on imported goods are usually called customs duties.

Custom-Houses.—The place appointed by the government at ports of entry where vessels and merchandise are entered and duties upon imported goods are collected, and where vessels obtain their clearance and other papers, is called a custom-house; the collectors, appraisers, surveyors, naval officers, and their deputies, examiners, clerks at the head of divisions, inspectors, gaugers and weighers, but not subordinate clerks, are called *custom-house officers*, and are sworn to faithful service; the persons who act for merchants in the business of entering and clearing goods and vessels, and in the transaction of general business, are known officially as *custom-house brokers*.

A Custom-house Entry is a statement made in writing to the collector of the district, by the owners or consignees of the merchandise on board any ship or vessel, which they desire to land.

Bonded Goods.—Foreign goods are said to be *bonded*, when the payment of the duties is secured by a bond, or when warehoused in a government store or warehouse, and under the control of the collector of the port until entered for consumption and the duties are paid. (See *Warehousing.*)

When goods are shipped from a foreign port and destined for an interior point or other place in the United States that is not a port of entry, they first go to a port of entry and then are forwarded *in bond* to the point of destination. This trans-shipment is effected through means of a custom-house broker at the port of entry, to whom the invoice, bill of lading, and other shipping papers are sent.

TELEGRAPHS

The business of telegraphy is carried on by corporations and consists of the making and performing of a system of contracts.

Parties to the Contract.—There are two parties to the contract, (1) the sender of the message, and (2) the telegraph company. Each party agrees to do certain things and each must keep his (or its) agreement. If the company fails to do what it agreed, the sender can compel it to pay for all loss resulting.

Whether the Company can be held liable in damages to the person to whom the message is sent is a much mooted question. The tendency of the law is to hold the Company liable to such person, if he is in fact injured by the Company's failure to do its duty. In such cases the condition on back of blank may become important.

The Contract.—The ordinary telegraph blank usually constitutes the contract. The sender requests the company to send a message (called a dispatch), and such a request is in effect an offer to pay for the service if rendered. The company by taking the message agrees to send it, i. e., accepts the offer. The request and compliance, or the offer and acceptance, make the contract.

The Terms.—The principal parts of this contract are (1) the sender agrees to pay for the message at the regular rate and the company may refuse to take it unless he pays in advance; (2) the company agrees to send the message by telegraph with promptness, deliver it to the person addressed and not reveal its contents to any one else.

Accuracy.—The message must be sent as it is given. Hence the operator cannot correct evident mistakes, such as mistakes of grammar, nor add, nor omit anything, nor make any change in it.

Promptness.—The message must be sent as soon as possible and different messages must be sent in the order in which they are received.

Secrecy.—A telegraph company is a confidential messenger. It has no right to reveal the message to any one,

except the one to whom it is addressed, but in court the message may be read in evidence.

Submarine Telegraphy.—Although the system of transmitting messages by means of electric cables laid on the bottom of the sea has come into use since 1851, it is now in operation in almost every part of the world. The total length of the submarine cables of the world to-day is over 180,000 nautical miles.

Wireless Telegraphy.—In 1897 Marconi announced a system of wireless telegraphy, operated by means of electrical vibrations set up in one apparatus and transmitted through space to a distant receiving apparatus without the aid of an intervening wire. On December 21, 1902, he established wireless telegraphic communication between Cape Breton, Canada, and Cornwall, England, a distance of 2,300 miles. Messages are now sent regularly by this system for considerable distances, and it is contended that so far as reliability goes, wireless telegraphy is far superior to the ordinary wire lines.

An ocean steamship, with a wireless telegraph equipment on board, is in constant communication with land and with other vessels similarly equipped throughout its trip, and the safety as well as comfort of an oceanic voyage is immeasurably increased by its use.

Wireless telegraphy has been most successfully used in oceanic signaling. The Japanese are in a great measure indebted to it for the success of their navy over that of Russia at Port Arthur, their principal warships being equipped with the necessary wireless transmitting and receiving apparatus.

MERCANTILE AGENCIES

A Mercantile Agency is an establishment for supplying merchants, bankers, and all who do a more or less credit business, with information as to the financial standing of persons engaged in business.

How they Operate.—These agencies obtain from local correspondents in all parts of the country information as to the character and personal responsibility of individuals, firms, and corporations, and make such information readily available at all business centers.

Commercial Ratings.—From the information thus obtained is deduced what are known and recognized as "commercial ratings." The names of the various merchants, with the ratings, are issued quarterly, in book form, and are classified, first by states and provinces, then by cities and towns, all arranged in alphabetical order. These volumes, covering the United States and Canada, embrace a million and a quarter of distinctive business organizations, and yet so simply are they classified that a reference can be had with as much readiness as the finding of a subject in a cyclopedia.

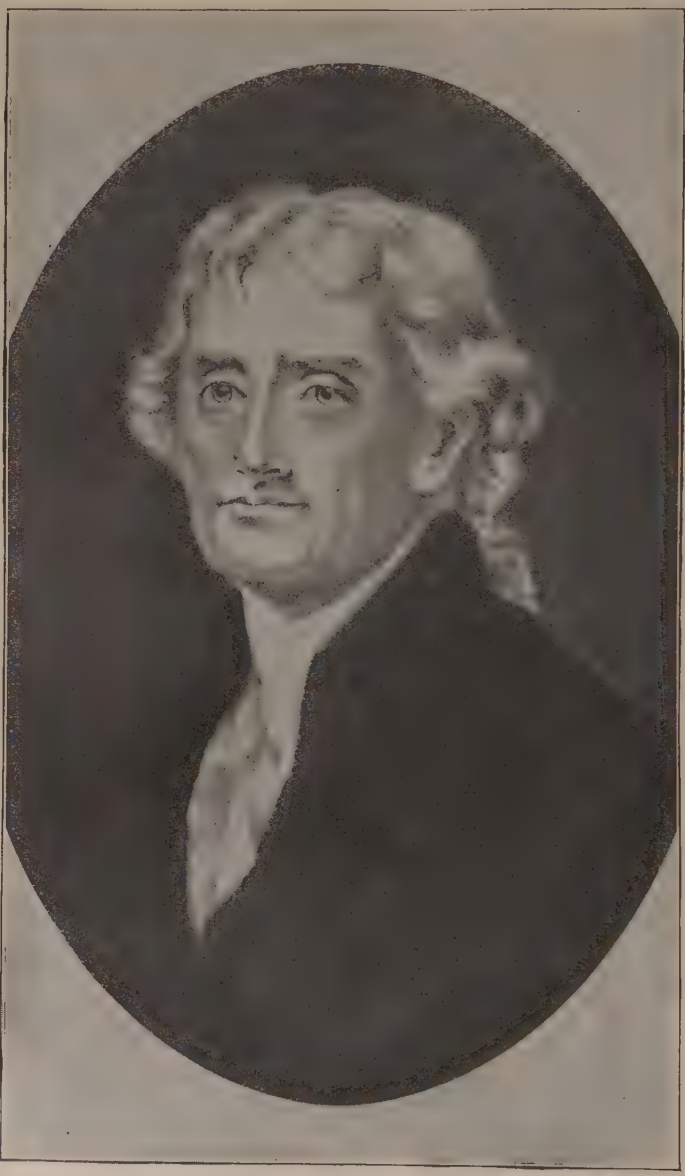
Leading Agencies.—The Bradstreet and R. G. Dun & Co. concerns are the leading agencies for the United States and Canada. They have headquarters in New York, and sub-agencies in all principal cities. Agencies also exist in Europe, and importing and exporting houses on opposite sides of the globe are thus kept informed as to each other's commercial standing.

Benefit to Merchants.—This system enables the solvent merchant to purchase goods anywhere with reasonable certainty that they will be delivered promptly, avoiding undue delay consequent to investigating his credit. The agency thus serves as a sort of clearing-house for credit, and good ratings are much sought after in the business world.

Credit Books are also issued, furnishing the same sort of information to those selling to particular trades.

PART VII

Deeds, Mortgages, Leases, Loans, Licenses, etc.



1743 **THOMAS JEFFERSON** 1826
Third President of the United States
Founder of the Democratic Party

DEEDS

A Deed is an instrument in writing and under seal, whereby real estate or some interest therein is conveyed.

The Seal required by the common law consists of an impression upon wax, wafer or other tenacious substance, but in some of the States a scroll or circle made with a pen around the word seal or in place of the seal is sufficient. In some States no seal is required except in case of deeds by corporations.

The seal of a deed imparts consideration.

Names of Parties.—The maker of the deed is called the grantor, the party to whom it is delivered the grantee.

Requisites of a Valid Deed.—1. Competent parties. 2. Consideration. 3. The deed must be reduced to writing. 4. It must be duly executed and delivered. If signed by an agent or attorney, the seal should be that of the principal, and the authority of the agent to use the seal should itself be under seal. To be effective against third parties it must be duly acknowledged and recorded. (See Acknowledgments.)

The Consideration on which the deed is based may be either good (as for love and affection), or valuable (as for money or other property). It is customary, though not necessary, to mention some nominal sum, as one dollar, even when no money price is paid.

The Property to be conveyed should be described by boundaries as minutely as possible.

When Wife Must Join.—When the wife has dower or homestead to be released, as in most States, she must join with the husband in the deed. A husband and wife may, by a joint deed, convey the real estate of the wife; and in some of the States her acknowledgment must be taken apart from her husband. (See Acknowledgments.)

Acknowledgment.—The mode and effect of an acknowledgment or of a deed is in most States governed by the law of the State where the land lies, and not by that of the place where the acknowledgment is taken. Where the deed is executed by an attorney in fact, it is customary to have the power of attorney acknowledged by the principal and the deed acknowledged by the attorney.

Separate Acknowledgment by wife is required in Alaska, Arkansas, Delaware, District of Columbia, Florida, Georgia, Idaho, Kentucky, Louisiana, Montana, Nevada, New Jersey, North Carolina, Oregon, South Carolina, Tennessee, and Texas.

Witnesses.—It is always best that the execution of the deed should be witnessed, even though not required by statute. A witness should have no interest in the deed. Therefore in some States a wife is not a proper witness of a deed to her husband. One witness to the execution of deeds is required in District of Columbia, Maryland, Nebraska, New Jersey, Oklahoma, Utah, Wyoming. Two witnesses to the execution of deeds are required in Arkansas, Connecticut, Florida, Georgia, Louisiana, Michigan, Minnesota, New Hampshire, Ohio, Oregon, South Carolina, Texas, Vermont, and Wisconsin. If witnesses die proof of their handwriting will be admitted; if this cannot be obtained, proof of the grantor's handwriting is sufficient.

The Estate Passes upon the actual delivery of the deed. If it is retained until the grantor's death, it becomes void and of no effect. But where it is delivered to a third person to transfer to the grantee upon the happening of some event, as the death of the grantor, the estate will pass upon that final delivery. Such a deed is called an escrow.

Recording.—The object of the public recording of a deed is not to give validity as between the grantor and grantee, but to protect the grantee against subsequent bona fide purchasers or mortgagees, and against the grantor's creditors.

Summary.—Deeds should be signed, sealed, witnessed, acknowledged, delivered, and recorded.

Caution! Do not purchase real estate without first having the title carefully examined by a competent lawyer or Title Company. Usually an agreement to sell and purchase is signed by both parties which provides that the title of the property is good and marketable and free from incumbrance, and a small payment is made on account of the purchase as earnest money.

DIFFERENT KINDS OF DEEDS

A Warranty Deed is so called because the grantor covenants to warrant and defend lands mentioned against all persons, and to the extent specified.

A General Warranty covenants and warrants against all persons whosoever.

A Special Warranty covenants and warrants only against one person, his heirs and those claiming under him.

A Quit Claim Deed is one which conveys all the interest which the grantor possesses, whatever it may be, in the lands specified, without containing any warrants. By it the grantor merely quit claims any interest he may have, but does not warrant his title.

A Trust Deed conveys property to persons to hold for the use of some other person who is entitled to the proceeds, title, or use of the property.

Tax Deeds are made by a public officer after sale of the land for non-payment of taxes. They differ from common deeds in that they do not in themselves transfer title. That is to say, any irregularity or illegality in the sale or other proceedings on which the deed is based will invalidate the deed itself. In many States the grantee of such a deed holds the property subject to the right of the owner to redeem it within a specified time, by paying taxes, costs and interest on the purchase money, at a fixed rate, greater than the usual rate of interest.

Deeds by Executors, Administrators, or Guardians generally contain no warranty; or a special warranty that the grantor has not done or committed any act whereby the premises conveyed are charged or encumbered. Every requisition of the law should be carefully complied with, and every requisition of the law must be complied with to give a good title.

Forms of Deeds conveying land are prescribed by some States, and such form should generally be used.

Warranty Deed

THIS INDENTURE, made this *tenth day of April,* in the year of our Lord one thousand nine hundred and *four,* between *Howard Denman* and *Mary Denman, his wife,* of the village of *Bristol,* in the County of *Morgan,* State of *Ohio,* party of the first part, and *William A. Martin,* of the City of *Columbus,* in the County of *Franklin,* and State of *Ohio,* party of the second part.

Witnesseth, That the said party of the first part, for and in consideration of the sum of *Five Thousand* ($5,000) *Dollars,* in hand, paid by the said party of the second part, the receipt whereof is hereby acknowledged, have granted, bargained, sold, remised, released, conveyed, aliened, and confirmed, and, by these presents, do grant, bargain, sell, remise, release, convey, alien, and

confirm unto the said party of the second part, and his heirs and assigns forever, all that certain piece, or parcel, of land situated and being in the Village of *Bristol*, County of *Morgan*, and State of *Ohio*, and described as follows, to wit:

The Northeast Quarter of *Section Fifteen* (15), in *Township Twenty-eight* (28), *South of Range Nine* (9), *West of the Fourth Principal Meridian, containing One Hundred and Fifty acres* by *government survey*.

Together with all and singular the hereditaments thereto belonging or in any way appertaining, *To Have and to Hold* the said premises as described, with the appurtenances, unto the said party of the second part, and to his heirs and assigns forever. And the said party of the first part, their heirs, executors, and administrators, do covenant, grant, bargain, and agree to and with the said party of the second part, his heirs and assigns, that at the time of the ensealing and delivery of these presents they are well-seized of the premises above conveyed, as of a good, sure, perfect, absolute, and indefeasible estate of inheritance in law, in fee simple, and have good right, full power and lawful authority to grant, bargain, sell, and convey the same in manner and form aforesaid; that they are free from all other grants, bargains, sales, liens, taxes, assessments, and encumbrances of what kind or nature whatsoever, and that they will, and their heirs, executors, and administrators shall *warrant* and *defend* the same against all lawful claims whatsoever.

In Witness Whereof, The said party of the first part *have* hereunto set *their* hands and seals the day and year first above written.

HOWARD DENMAN, [SEAL]
MARY DENMAN. [SEAL]

Signed, sealed and delivered in the presence of
H. R. MOYER.
B. J. SLICK.

[*To be duly acknowledged and recorded.*]

Quit Claim Deed

THIS INDENTURE, made the first of March, in the year of our Lord one thousand nine hundred and four, *between* James R. Ward and Louise L. Ward, his wife, of Hastings, Barry County, State of Michigan, parties of the first part, and Myer A. Walker, of Richland, County of Kalamazoo, State of Michigan, party of the second part,

Witnesseth, That the said parties of the first part, for and in consideration of the sum of One Dollar to them in hand paid by the party of the second part, the receipt whereof is hereby confessed and acknowledged, do, by these presents, grant, bargain, sell, remise, release, and forever *quit claim* unto the party of the second part, and to his heirs and assigns forever, all that certain piece, or parcel, of land situated and being in the County of Barry and State of Michigan, and described as follows, to-wit:

The Southwest quarter of Section number Nine, in Township number Three, South of Range number Five, West, containing One Hundred and Fifty Acres of Land, be the same more or less. *Together* with all and singular the hereditaments and appurtenances thereto belonging, or in anywise appertaining. *To Have and To Hold* the said premises, as above described,

to the said party of the second part, and to his heirs and assigns, to the sole and only proper use and benefit of the said party of the second part, his heirs and assigns, forever.

In Witness Whereof, The said parties of the first part have hereunto set their hands and seals the day and year first above written.

JAMES R. WARD, [SEAL]
LOUISE L. WARD. [SEAL]

Signed, sealed, and delivered in the presence of
WALTER R. WING,
CHAS. COMMONS.

[*To be duly acknowledged and recorded.*]

Form of Quitclaim Deed for Maine

KNOW ALL MEN BY THESE PRESENTS, That *I, John Doe* of *Portland* in the County of *Cumberland* and State of *Maine,* in consideration of *three thousand* dollars paid by *Richard Roe* of said *Portland* the receipt whereof *I* do hereby acknowledge, do hereby remise, release, bargain, sell and convey and forever quitclaim unto the said *Richard Roe, his* Heirs and Assigns forever, (*description of land*).

TO HAVE AND TO HOLD the same, together with all the privileges and appurtenances thereunto belonging to *him,* the said *Richard Roe, his* Heirs and Assigns forever.

AND *I* do COVENANT with the said Grantee, his Heirs and Assigns, that I will WARRANT AND FOREVER DEFEND the premises to him, the said Grantee, his Heirs and Assigns forever, against the lawful claims and demands of all persons, claiming by, through or under me.

IN WITNESS WHEREOF, I, the said *John Doe* and *Mary Doe* wife of the said *John Doe,* joining in this deed as Grantor, and relinquishing and conveying her rights by descent and all her other rights in the above described premises have hereunto set our hands and seals this *first* day of *February* in the year of our Lord one thousand nine hundred and six.

JOHN DOE, [SEAL]
MARY DOE, [SEAL]

Signed, sealed and delivered in presence of

.....

.....

STATE OF MAINE, CUMBERLAND, } ss.

February 1, 1906.

Personally appeared the above named *John Doe* and acknowledged the above instrument to be his free act and deed.

Before me,

JOHN KING,
Justice of the Peace.

Form of Warranty Deed for Maine

KNOW ALL MEN BY THESE PRESENTS, That I, *John Doe* of *Portland*, in the County of *Cumberland* and State of *Maine* in consideration of *one thousand* dollars paid by *Richard Roe* of said *Portland*, the receipt whereof *I* do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said *Richard Roe, his* Heirs and Assigns forever, (*description of land*).

TO HAVE AND TO HOLD the aforegranted and bargained premises with all the privileges and appurtenances thereof to *him* the said *Richard Roe, his* Heirs and Assigns, to their use and behoof forever.

AND *I* do COVENANT with the said Grantee, *his* Heirs and Assigns, that *I am* lawfully seized in fee of the premises: that they are free of all incumbrances; *except a mortgage for $300;* that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that *I* and *my* Heirs, shall and will WARRANT AND AND DEFEND the same to the said Grantee *his* Heirs and Assigns forever, against the lawful claims and demands of all persons, *except as aforesaid.*

IN WITNESS WHEREOF, *We,* the said *John Doe* and *Mary Doe,* wife of the said *John Doe,* joining in this deed as Grantor, and relinquishing and conveying her rights by descent and all her other rights in the above described premises, have hereunto set our hands and seals this *first* day of *February,* in the year of our Lord one thousand nine hundred and six.

JOHN DOE, [SEAL]
MARY DOE, [SEAL]

Signed, sealed and delivered
in presence of
.....
.....

STATE OF MAINE, }
CUMBERLAND, } ss.

February 1, 1906.

Personally appeared the above named John Doe and acknowledged the above instrument to be his free act and deed.

Before me,

THOMAS DAY,
Justice of the Peace.

Form of Quitclaim Deed for New Hampshire

KNOW ALL MEN BY THESE PRESENTS, That I, *John Doe* of *Concord,* in the County of *Merrimack* and State of *New Hampshire,* for and in consideration of the sum of *one thousand* dollars to me in hand before the delivery thereof, well and truly paid by *Richard Roe* of *Manchester,* in the County of *Hillsborough* and said State, have remised, released and forever QUITCLAIMED, and by these presents do remise, release and forever quitclaim unto the said *Richard Roe,* his heirs and assigns forever, a certain parcel of land (*description*).

TO HAVE AND TO HOLD the said premises, with all the privileges and appurtenances thereunto belonging, to the said *Richard Roe,* his heirs

and assigns forever; and I do hereby covenant with the said *Richard Roe* that I will warrant and defend the said premises to him, the said *Richard Roe*, his heirs and assigns, against the lawful claims and demands of any person or persons claiming by, from or under me.

And I, *Mary Doe*, wife of said *John Doe*, for the consideration aforesaid, do hereby release my right of dower in said premises.

And we and each of us do hereby release all rights of HOMESTEAD, secured to us, or either of us, by Chapter 138 of the Public Statutes of New Hampshire, or by any other statute of said State.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this *first* day of *January*, in the year of our Lord 1906.

JOHN DOE, [SEAL]
MARY DOE, [SEAL]

Signed, sealed and delivered
in presence of us:
JOHN SMITH,
PETER JONES.
to both.

STATE OF NEW HAMPSHIRE,
MERRIMACK, } ss.

January 1, A. D. 1906.

Personally appeared the above named *John Doe* and *Mary Doe* and acknowledged the foregoing instrument, to be their voluntary act and deed.

Before me,

THOMAS KING,
Justice of the Peace.

Form of Warranty Deed for New Hampshire

KNOW ALL MEN BY THESE PRESENTS, That I, *John Doe* of *Concord*, in the County of *Merrimack* and State of *New Hampshire*, for and in consideration of the sum of *one thousand* dollars to me in hand before the delivery hereof well and truly paid by *Richard Roe* of *said Concord*, the receipt whereof I do hereby acknowledge, have granted, bargained, and sold, and by these presents do give, grant, bargain, sell, alien, enfeoff, convey and confirm unto the said *Richard Roe* and his heirs and assigns forever (*description of land*).

TO HAVE AND TO HOLD the said granted premises, with all the privileges and appurtenances to the same belonging to him, the said *Richard Roe* and his heirs and assigns, to his and their only proper use and benefit forever. And I, the said *John Doe*, and my heirs, executors and administrators, do hereby covenant, grant and agree, to and with the said *Richard Roe* and his heirs and assigns that until the delivery hereof I am the lawful owner of the said premises, and I am seized and possessed thereof in my own right in fee simple; and have full power and lawful authority to grant and convey the same in manner aforesaid; that the premises are free and clear from all and every incumbrance whatsoever; and that I and my heirs, executors and administrators, shall and will WARRANT and DEFEND the same to the said *Richard Roe* and his heirs and assigns, against the lawful claims and demands of any person or persons whomsoever.

And I, *Mary Doe*, wife of the said *John Doe*, in consideration aforesaid, do hereby relinquish my right of dower in the before mentioned premises.

And we and each of us do hereby release all rights of HOMESTEAD, secured to us, or either of us, by Chapter 138 of the Public Statutes of New Hampshire, or any other statute of said State.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this first day of January in the year of our Lord 1906.

JOHN DOE, [L. S.]
MARY DOE, [L. S.]

Signed, sealed and delivered
in presence of us:
JOHN SMITH,
MARY WILLIAMS,
to both.

STATE OF NEW HAMPSHIRE,
MERRIMACK, } ss.

January 1, 1906.

Personally appeared the above named John Doe and Mary Doe and acknowledged the foregoing instrument to be their voluntary act and deed.

Before me,

THOMAS KING,
Justice of the Peace.

Form of Mortgage Deed for New Hampshire

KNOW ALL MEN BY THESE PRESENTS, That I, *John Doe* of *Concord*, in the County of *Merrimack* and State of *New Hampshire*, for and in consideration of the sum of *one thousand* dollars to me in hand before the delivery hereof, well and truly paid by *Richard Roe* of *Manchester*, in the County of *Hillsborough*, and said State, the receipt whereof I do hereby acknowledge, have given, granted, bargained and sold, and by these presents do give, grant, bargain, sell, alien, enfeoff, convey and confirm unto the said *Richard Roe*, his heirs and assigns, forever, a certain tract of land situated in ..... and bounded and described as follows, to wit: (*Describe the premises.*)

TO HAVE AND TO HOLD the said granted premises, with all the privileges and appurtenances to the same belonging, to him the said *Richard Roe* and his heirs and assigns, to his and their own proper use and benefit forever. And I, the said *John Doe*, and my heirs, executors and administrators, do hereby covenant, grant and agree, to and with the said *Richard Roe* and his heirs and assigns that until the delivery hereof I am the lawful owner of the said premises, and am seized and possessed thereof in my own right in fee simple; and have full power and lawful authority to grant and convey the same in manner aforesaid; that the said premises are free and clear from all and every incumbrance whatsoever; and that I and my heirs, executors and administrators shall and will warrant and defend the same to the said *Richard Roe* and his heirs and assigns, against the lawful claims and demands of any person or persons whomsoever.

And I, *Mary Doe,* wife of the said *John Doe,* in consideration aforesaid, do hereby relinquish my right of dower in the before mentioned premises.

And we each of us do hereby release, discharge and waive all such rights of exemption from attachment and levy or sale on execution, and such other rights whatsoever in said premises, and in each and every part thereof, as our family homestead, as are reserved or secured to us, or either of us, by the Statute of the State of New Hampshire, passed July 4th, 1851, entitled, "An Act to exempt the homestead of families from attachment and levy or sale on execution," or by any other statute or statutes of said State.

Nevertheless, it is to be considered, and the condition of the foregoing Deed is such that if the said *John Doe,* his heirs, executors and administrators shall well and truly pay unto the said *Richard Roe,* his heirs and assigns the sum of *one thousand* dollars in *three years* from the date hereof with interest at the rate of *six* per cent per annum; then the foregoing Deed is to be void, and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this *first* day of *January* in the year of our Lord one thousand nine hundred and six.

JOHN DOE, [SEAL]
MARY DOE, [SEAL]

Signed, sealed and delivered
in presence of us:
JOHN SMITH,
WILLIAM JONES,
to both.

STATE OF NEW HAMPSHIRE,
MERRIMACK, } ss.

Personally appeared the above named *John Doe* and acknowledged the foregoing instrument to be his voluntary act and deed.

Before me,

Dated the *first* day of *January,* 1906.

JOHN BROWN,
Justice of the Peace.

Form of Quitclaim Deed for Massachusetts

KNOW ALL MEN BY THESE PRESENTS, That I, *John Doe* of *Boston,* in the County of *Suffolk* and *Commonwealth* of *Massachusetts,* in consideration of *one thousand* dollars, paid by *Richard Roe* of *Springfield,* in the County of *Hampden* and *Commonwealth* of *Massachusetts,* the receipt whereof is hereby acknowledged, do hereby remise, release and forever quitclaim unto the said *Richard Roe* (description).

TO HAVE AND TO HOLD the granted premises with all the privileges and appurtenances thereto belonging, to the said *Richard Roe* and his heirs and assigns to their own use and behoof forever.

And I do hereby for myself and my heirs, executors and administrators, covenant with the said grantee and his heirs and assigns that the granted premises are free from all incumbrances made or suffered by

me and that I will and my heirs, executors and administrators shall Warrant and Defend the same to the said grantee and his heirs and assigns forever against the lawful claims and demands of all persons claiming by, through, or under me but against none other.

And for the consideration aforesaid I, *Mary Doe,* wife of said *John Doe,* do hereby release unto the said grantee and his heirs and assigns all right of or to both DOWER and HOMESTEAD in the granted premises, and all other rights and interests therein.

IN WITNESS WHEREOF, We, the said *John Doe* and *Mary Doe* hereunto set our hands and seals this *first* day of *January,* in the year one thousand nine hundred and six.

JOHN DOE, [SEAL]
MARY DOE, [SEAL]

Signed and sealed in
presence of
.....
.....

COMMONWEALTH OF MASSACHUSETTS, } ss.
SUFFOLK, }

Jan. 1, 1906.

Then personally appeared the above named *John Doe* and acknowledged the foregoing instrument to be his free act and deed.

Before me,

JOHN SMITH,
Justice of the Peace.

Form of Warranty Deed for Massachusetts

KNOW ALL MEN BY THESE PRESENTS, That I, *John Doe* of *Boston,* in the county of *Suffolk* and Commonwealth of *Massachusetts,* in consideration of *One thousand* dollars paid by *Richard Roe* of *Springfield,* in the County of *Hampden* and said Commonwealth, the receipt whereof is hereby acknowledged, do hereby give, grant, bargain, sell and convey unto the said *Richard Roe* the following described parcel of land, viz.: (*Describe the premises*).

TO HAVE AND TO HOLD the granted premises, with all the privileges and appurtenances thereto belonging, to the said *Richard Roe* and his heirs and assigns to their own use and behoof forever.

And I hereby, for myself and my heirs, executors and administrators, COVENANT with the grantee and his heirs and assigns that I am lawfully seized in fee-simple of the granted premises; that they are free from all incumbrances; that I have good right to sell and convey the same as aforesaid; and that I will and my heirs, executors and administrators shall WARRANT AND DEFEND the same to the grantee and his heirs and assigns forever against the lawful claims and demands of all persons.

AND for the consideration aforesaid, I, *Mary Doe,* wife of said *John Doe,* do hereby release unto the said grantee and his heirs and assigns all right of or to both DOWER AND HOMESTEAD in the granted premises and all other rights and interests therein.

IN WITNESS WHEREOF, We, the said *John Doe* and *Mary Doe,* here-

unto set our hands and seals this *first* day of *January*, in the year one thousand nine hundred and six.

JOHN DOE, [SEAL]
MARY DOE, [SEAL]

Signed and sealed in
presence of

. . . . . .
. . . . . .

COMMONWEALTH OF MASSACHUSETTS, } ss.
SUFFOLK, }

Boston, January 1, 1906.

Then personally appeared the above named *John Doe* and acknowledged the foregoing instrument to be his free act and deed.

Before me,

JOHN SMITH,
Justice of the Peace.

Form of Quitclaim Deed for Connecticut

KNOW ALL MEN BY THESE PRESENTS, That I, *John Doe* of *Hartford*, in the County of *Hartford* and State of *Connecticut* for the consideration of *One thousand* dollars received to me in full satisfaction of *Richard Roe* of *New Haven* in the County of *New Haven* and State of *Connecticut*, do by these presents remise, release and forever QUITCLAIM unto the said *Richard Roe* all right, title, interest, claim and demand whatever which I, the said RELEASOR, have or ought to have in or to (*description*).

TO HAVE AND TO HOLD the premises, with all the appurtenances, unto the said RELEASEE and his heirs and assigns forever, so that neither the RELEASOR nor his heirs, nor any person under him or them, shall hereafter have any claim, right or title in or to the premises, or any part thereof, but therefrom I am and they are by these presents forever barred and secluded.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the *first* day of *January*, A. D., 1906.

JOHN DOE, [SEAL]

Signed, sealed and
delivered in presence of
JOHN BROWN,
MARY BROWN.

STATE OF CONNECTICUT, } ss.
HARTFORD COUNTY, }

Personally appeared *John Doe* signer and sealer of the foregoing instrument, and acknowledged the same to be his free act and deed,

Before me,

JOHN SMITH,
Justice of the Peace.

Commissioner of the Superior Court for Hartford County,
Notary Public.

Form of Warranty Deed for Connecticut

TO ALL PEOPLE TO WHOM THESE PRESENTS SHALL COME, GREETING:

KNOW YE, That I, *John Doe* of *Hartford*, in the County of *Hartford* and State of *Connecticut*, for the consideration of *One thousand* dollars received to me full satisfaction of *Richard Roe* of *New Haven*, in the County of *New Haven* and State of *Connecticut*, do give, grant, bargain, sell and confirm unto the said *Richard Roe* (*description*).

TO HAVE AND TO HOLD the above granted and bargained premises, with the privileges and appurtenances thereof, unto the said grantee his heirs and assigns forever, to his and their own proper use and behoof.

And also, I, the said grantor, do for myself, my heirs, executors and administrators, covenant with the said grantee, his heirs and assigns, that at and until the ensealing of these presents, I am well seized of the premises as a good indefeasible estate in fee simple; and have good right to bargain and sell the same in manner and form as is above written, and that the same is free of all encumbrances whatsoever.

AND FURTHERMORE, I, the said grantor, do by these presents bind myself and my heirs forever to warrant and defend the above granted and bargained premises to the said grantee, his heirs and assigns against all claims and demands whatsoever.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this *first* day of *January*, A. D. 1906.

JOHN DOE, [SEAL]

Signed, sealed and
delivered in presence of
JOHN SMITH,
MARY SMITH.

STATE OF CONNECTICUT, }
COUNTY, } ss.

Personally appeared *John Doe*, signer and sealer of the foregoing instrument, and acknowledged the same to be his free act and deed,

Before me,

THOMAS KING,
Justice of the Peace.

Form of Warranty Deed for Ohio

THIS INDENTURE, made this *tenth day of April*, in the year of our Lord one thousand nine hundred and *six*, between *Howard Denman* and *Mary Denman, his wife*, of the village of *Bristol*, in the County of *Morgan*, State of *Ohio*, party of the first part, and *William A. Martin*, of the City of *Columbus*, in the County of *Franklin*, and State of *Ohio*, party of the second part,

Witnesseth, That the said party of the first part, for and in consideration of the sum of *Five Thousand* ($5,000) *Dollars*, in hand, paid by the said party of the second part, the receipt whereof is hereby ac-

knowledged, have granted, bargained, sold, remised, released, conveyed, aliened, and confirmed, and, by these presents, do grant, bargain, sell, remise, release, convey, alien, and confirm unto the said party of the second part, and his heirs and assigns forever, all that certain piece, or parcel, of land situated and being in the Village of *Bristol,* County of *Morgan,* and State of *Ohio,* and described as follows, to wit:

The Northeast Quarter of *Section Fifteen* (15), in *Township Twenty-eight* (28), *South of Range Nine* (9), *West of the Fourth Principal Meridian, containing One Hundred and Fifty acres* by *government survey.*

Together with all and singular the hereditaments thereto belonging or in any way appertaining, *To Have and to Hold* the said premises as described, with the appurtenances, unto the said party of the second part, and to his heirs and assigns forever. And the said party of the first part, their heirs, executors, and administrators, do covenant, grant, bargain, and agree to and with the said party of the second part, his heirs and assigns, that at the time of the ensealing and delivery of these presents they are well-seized of the premises above conveyed, as of a good, sure, perfect, absolute, and indefeasible estate of inheritance in law, in fee simple, and have good right, full power and lawful authority to grant, bargain, sell, and convey the same in manner and form aforesaid; that they are free from all other grants, bargains, sales, liens, taxes, assessments, and encumbrances of what kind or nature whatsoever, and that they will, and their heirs, executors, and administrators shall *warrant* and *defend* the same against all lawful claims whatsoever.

In Witness Whereof, The said party of the first part *have* hereunto set *their* hands and seals the day and year first above written.

HOWARD DENMAN, [SEAL]
MARY DENMAN. [SEAL]

Signed, sealed and delivered in the presence of
H. R. MOYER,
B. J. SLICK.

[*To be duly acknowledged and recorded.*]

Form of Quitclaim Deed for Michigan

THIS INDENTURE, made the first day of March, in the year of our Lord one thousand nine hundred and six, *between* James R. Ward and Louise L. Ward, his wife, of Hastings, Barry County, State of Michigan, parties of the first part, and Myer A. Walker, of Richland, County of Kalamazoo, State of Michigan, party of the second part.

Witnesseth, That the said parties of the first part, for and in consideration of the sum of One Dollar to them in hand paid by the party of the second part, the receipt whereof is hereby confessed and acknowledged, do, by these presents grant, bargain, sell, remise, release, and forever *quit claim* unto the party of the second part, and to his heirs and assigns forever, all that certain piece, or parcel, of land situated and being in the County of Barry and State of Michigan, and described as follows, to-wit:

The Southwest quarter of Section number Nine, in Township number Three, South of Range number Five, West, containing One Hundred and Fifty Acres of Land, be the same more or less. *Together* with all and singular the hereditaments and appurtenances thereto belonging, or in

anywise appertaining. *To Have and To Hold* the said premises, as above described, to the said party of the second part, and to his heirs and assigns, to the sole and only proper use and benefit of the said party of the second part, his heirs and assigns, forever.

In Witness Whereof, The said parties of the first part have hereunto set their hands and seals the day and year first above written.

JAMES R. WARD, [SEAL]
LOUISE L. WARD. [SEAL]

Signed, sealed, and delivered in the presence of
WALTER R. WING,
CHAS. COMMONS.

[*To be duly acknowledged and recorded.*]

Form of Warranty Deed—Good for Any State

THIS INDENTURE, made this *Fourth day of March* in the year of our Lord One Thousand Nine Hundred and Six, between *John Dun* and *Mary Jane Dun, his wife,* of the City of *Ottawa,* in the County of *LaSalle,* and State of *Illinois,* parties of the first part, and *Wm. Johnson,* of the City of *Chicago,* in the County of *Cook,* and State of *Illinois,* party of the second part.

Witnesseth, That the said parties of the first part, for and in consideration of the sum of *One Thousand Dollars* in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, and the said party of the second part forever released and discharged therefrom, *have* granted, bargained, sold, remised, released, conveyed, aliened and confirmed, and by these presents *do* grant, bargain, sell, remise, release, convey, alien and confirm, unto the said party of the second part, and to *his* heirs and assigns forever, all the following described lot, piece, or parcel of land, situated in the County of *LaSalle,* and State of *Illinois,* and known and described as follows, to-wit:

(Here describe property)

Together with all and singular The hereditaments and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and all the estate, right, title, interest, claim or demand whatsoever, of the said parties of the first part, either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances: *To Have and to Hold* the said premises above bargained and described, with the appurtenances, unto the said party of the second part, *his* heirs and assigns, forever.

And The said *John Dun* and *Mary Jane Dun, his wife,* parties of the first part, for *themselves* and *their* heirs, executors and administrators, *do* covenant, grant, bargain and agree, to and with the said party of the second part, *his* heirs and assigns, that at the time of the ensealing and delivery of these presents, *they are* well seized of the premises above conveyed, as of a good, sure, perfect, absolute and indefeasible estate of inheritance in law, in fee simple, and *have* good right, full power, and lawful authority to grant, bargain, sell and convey the same in manner and form aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, taxes, assessments and encumbrances, of what kind or nature soever: and the above bargained premises, in the quiet and peaceable possession of the said party of the second part, *his* heirs and assigns, against all and

every other person or persons lawfully claiming or to claim the whole or any part thereof; the said party of the first part shall and will *Warrant and Forever Defend.*

And The said parties of the first part hereby expressly waive and release any and all right, benefit, privilege, advantage and exemption, under or by virtue of any and all Statutes of the State of *Illinois,* providing for the exemption of homesteads from sale on execution or otherwise.

In Witness Whereof, The said parties of the first part *have* hereunto set *their* hands and seals, the day and year first above written.

JOHN DUN, [SEAL]
MARY JANE DUN. [SEAL]

Signed, sealed, and delivered in the presence of
HENRY ROLPH,
JAS. WATSON.

STATE OF ILLINOIS, } *ss.*
COUNTY OF COOK. }

I, *John Smith,* a Justice of the Peace in and for said County, in the State aforesaid, do hereby certify, that *John Dun,* who is personally known to me to be the real person whose name is subscribed to the within Instrument as having executed the same, appeared before me this day, in person, and acknowledged that he signed, sealed and delivered the said instrument of writing as his free and voluntary act, for the uses and purposes therein set forth, and thereby conveyed all his right, title and interest in and to the premises described in said Instrument, and expressly waived and released all right, title and benefit of exemption under any and all Homestead Exemption Laws, so-called, of said State of Illinois.

And the said Mary Jane Dun, wife of the said John Dun, having been by me examined, separate and apart from, and out of the hearing of her husband, and the contents and meaning of said instrument, and all her rights under the Homestead Laws of the State of Illinois having been by me made known and fully explained to her, acknowledged it to be her act and deed, and that she had executed the same, and relinquished her dower and all other right, title and interest in and to the lands and tenements therein mentioned, and expressly waived and released all her rights and advantages under and by virtue of all laws of said State of Illinois relating to the Exemption of Homesteads, all voluntarily and freely, and without the compulsion of her said husband, and that she does not wish to retract the same.

Given under my hand and seal, this Fourth day of March, A. D. 1906.

JOHN SMITH.

Form of Mortgage—Without Power of Sale—Good for any State.

THIS INDENTURE, made this *fourth* day of *March,* in the year of our Lord one thousand nine hundred and six, between *Samuel F. Allen and Louise Allen, his wife,* of the village of *Fulton,* in the County of *Jackson,* and State of *Iowa,* parties of the first part, and *Robert Beatty,* of the village of *Fulton,* in the County of *Jackson,* and State of *Iowa,* party of the second part:

Whereas, The said parties of the first part are justly indebted to the said party of the second part in the sum of *one thousand dollars* secured to be paid by a certain bond or obligation bearing even date herewith, conditioned for the payment of the said sum of one thousand dollars on the *fourth day of March,* nineteen hundred and seven and the interest thereon to be computed from date hereof at the rate of six per centum per annum, to be paid annually.

It being thereby expressly agreed, that the whole of the said prin-

cipal sum shall become due after default in the payment of interest, taxes or assessments, as hereinafter provided.

Now, therefore, this Indenture Witnesseth, That the said parties of the first part, for the better securing the payment of the money aforesaid, with interest thereon according to the tenor and effect of the said *Bond or Obligation,* above mentioned, and also in consideration of the further sum of One Dollar to *them* in hand paid by the said party of the second part, at the delivery of these Presents, the receipt whereof is hereby acknowledged, have granted, bargained, sold, remised, released, conveyed, aliened and confirmed, and by these Presents do grant, bargain, sell, remise, release, convey, alien and confirm unto the said party of the second part, and to *his* heirs and assigns forever, all the following described lot, piece, or parcel, of land, situate in the County of *Jackson* and State of *Iowa,* and known and described as follows, to-wit:

(Here describe property.)

To Have and to Hold the Same, Together with all and singular the tenements, hereditaments, privileges, and appurtenances thereunto belonging, or in any wise appertaining; and also, all the estate, interest, and claim whatsoever, in law as well as in equity, which the said parties of the first part have in and to the premises hereby conveyed, unto the said party of the second part, *his* heirs and assigns, and to their only proper use, benefit, and behoof, forever;

Provided always, And these Presents are upon this EXPRESS CONDITION, that if the said parties of the first part, *their* heirs, executors, or administrators, shall well and truly pay, or cause to be paid, to the said party of the second part, *his* heirs, executors, administrators, or assigns, the aforesaid sum of money, with interest thereon, at the time and in the manner specified in the above mentioned *Bond or Obligation,* according to the true intent and meaning thereof, then and in that case these Presents, and everything herein expressed, shall be absolutely null and void.

And The said parties of the first part, for *Ourselves* and *Our* heirs, executors, and administrators, do hereby covenant and agree with the said party of the second part, that at the time of the delivery hereof, the said parties of the first part, are the lawful owners of the premises above granted, and seized thereof, in fee simple absolute; that *we and our heirs* will WARRANT AND DEFEND the above granted premises in the quiet and peaceable possession of the said party of the second part, *his* heirs and assigns FOREVER, that they are free from all incumbrances whatsoever, and that the said parties of the first part will, in due season, pay all taxes and assessments on said premises, until said indebtedness aforesaid shall be fully paid.

And The said parties of the first part do hereby expressly release and waive all rights, under and by virtue of the Homestead Exemption Laws of the State of *Iowa* in and to said premises.

In Witness Whereof, We, the said parties of the first part, *do* hereunto set *our* hands and seals the day and year first above written.

SAMUEL F. ALLEN, [SEAL]
LOUISE ALLEN. [SEAL]

Signed, sealed, and delivered in the presence of
HARRY BROWN,
JOHN SCHNELL.

STATE OF .....} ss.
COUNTY OF..... }

I, ..., in and for said County, in the State aforesaid, DO HEREBY CERTIFY, that .....
.....
personally known to me to be the same person whose name subscribed to the foregoing Instrument, appeared before me this day in person, and acknowledged that he signed, sealed and delivered the said Instrument as his free and voluntary act, for the uses and purposes therein set forth, including the release and waiver of the right of homestead.

Given Under my hand and seal, this ..... day of ..... A. D. 190..

.....
.....

Form of Quitclaim Deed—For any State

THIS INDENTURE, made the *tenth* day of *March,* in the year of our Lord one thousand nine hundred and six, between *Sam Burns* and *his wife Jessie Burns,* of the City of *St. Paul,* in the State of *Minnesota,* parties of the first part, and *Walter J. Paul,* of the Town of *Cokato,* County of *Wright,* in the State of *Minnesota,* the party of the second part, *Witnesseth*: That the said parties of the first part, for and in consideration of the sum of *nine thousand* ($9,000) *dollars,* currency of the United States of America, to us in hand paid by said party of the second part, the receipt whereof is hereby acknowledged, do by these presents remise, release, and forever Quitclaim unto the said party of the second part, and to his heirs and assigns forever, all the certain lots, pieces or parcels of land, situated in the said Town of Cokato, County of Wright, and State of Minnesota, and bounded and particularly described as follows, to-wit:

Lot number three (3), in block number six (6), in said Town of Cokato, and County of Wright, State of Minnesota. Also the northwest quarter of section thirty-seven (37), in the Township of Cokato, County of Wright, and State of Minnesota, containing one hundred and sixty acres, more or less, according to the United States surveys.

Together with all and singular the tenements, hereditaments and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof.

To have and to hold, all and singular, the said premises, together with the appurtenances, unto the said party of the second part, and to his heirs and assigns forever.

In Witness Whereof, The said parties of the first part have hereunto set their hands and seals the day and year first above written.

SAM BURNS, [SEAL]
JESSIE BURNS. [SEAL]

Signed, sealed, and delivered in the presence of
WILLIAM HILL,
R. O. COWAN.

STATE OF MINNESOTA, } ss.
COUNTY OF WRIGHT. }

On the *tenth* day of *March,* in the year one thousand nine hundred and six, before me personally appeared the above named *Sam Burns* and *Jessie Burns, his wife,* each and all to me known and known to me

to be the individuals described in and who executed the foregoing instrument and they thereupon acknowledged to me that they executed the same.

JOHN THOMPSON,
Notary Public.

Date of Commission.

Form of Quitclaim Deed for New York

THIS INDENTURE, made the *first* day of *January,* in the year one thousand nine hundred and six.

BETWEEN *John Doe* of *Albany,* in the County of *Albany* and State of *New York,* of the first part, and *Richard Roe* of the city, county and State of *New York,* of the second part.

WITNESSETH, That the said party of the first part, for and in consideration of the sum of *One thousand* dollars lawful money of the United States, paid by the said party of the second part, doth hereby remise, release and forever quitclaim unto the said party of the second part, his heirs and assigns forever, all (*Description.*)

TOGETHER with the appurtenances and all the estate and rights of the said party of the first part, in and to the said premises.

TO HAVE AND TO HOLD the above granted, bargained and described premises, unto the said party of the second part, his heirs and assigns, forever.

IN WITNESS WHEREOF, The said party of the first part hath hereunto set his hand and seal the day and year first above written.
In presence of

WILLIAM SMITH.

JOHN DOE, [SEAL]

STATE OF NEW YORK, } ss.
COUNTY OF ALBANY, }

On this *first* day of *January* in the year one thousand nine hundred and six, before me personally came *John Doe,* to me known, and known to me to be the individual described in and who executed the foregoing instrument, and he thereupon acknowledged to me that he executed the same.

JOHN SMITH,

Date of Commission. (Seal.)

Form of Deed with Full Covenants for New York

THIS INDENTURE, made the *first* day of *January,* in the year nineteen hundred and six.

BETWEEN *John Doe* of *Albany,* in the County of *Albany* and State of New York, party of the first part, AND Richard Roe of the city, County and State of New York, party of the second part.

WITNESSETH, That the said party of the first part, in consideration of *one thousand* dollars, lawful money of the United States, paid by the party of the second part, doth hereby grant and release unto the said party of the second part, his heirs and assigns forever, all (*description*) Together with the appurtenances and all the estate and rights of the party of the first part in and to said premises.

To Have and to Hold the above granted premises unto the said party of the second part, his heirs and assigns forever.

And the said party of the first part, doth covenant with said party of the second part as follows:

First. That the said party of the first part, is seized of the said premises in fee simple and has good right to convey the same.

Second. That the party of the second part shall quietly enjoy the said premises.

Third. That the said premises are free from incumbrances.

Fourth. That the party of the first part will execute or procure any further necessary assurance of the title to said premises.

Fifth. That the said party of the first part will forever warrant the title to said premises.

In Witness Whereof, The said party of the first part has hereunto set his hand and seal the day and year first above written.

In presence of

John Smith.

John Doe. [SEAL]

State of New York,
City of Albany,
County of Albany, } ss.

On the *first* day of *January,* in the year nineteen hundred and six, before me personally came *John Doe,* to me known and known to me to be the individual described in, and who executed the foregoing instrument and acknowledged that he executed the same.

Peter Jones,
Notary Public.

Date of Commission.

Form of Mortgage Deed for New York

This Indenture, Made the *first* day of *January,* in the year nineteen hundred and *six.*

Between *John Doe* of *Albany,* in the County of *Albany* and State of New York, party of the first part, and *Richard Roe* of the City, County and State of New York, party of the second part;

Whereas, The said *John Doe* is justly indebted to the said party of the second part, in the sum of *one thousand* dollars, lawful money of the United States, secured, to be paid by a certain bond or obligation bearing even date herewith, conditioned for the payment of the said sum of *one thousand* dollars, on the *first* day of *January,* nineteen hundred and *eight,* and the interest thereon, to be computed from *date hereof* at the rate of *six* per centum per annum, and to be paid semi-annually.

It Being Thereby Expressly Agreed that the whole of the said principal sum shall become due after default in the payment of interest, taxes or assessments, as hereinafter provided.

Now This Indenture Witnesseth, That the said party of the first part, for the better securing the payment of the said sum of money mentioned in the condition of the said bond or obligation, with interest thereon, and also for and in consideration of one dollar, paid by the said party of the second part, the receipt whereof is hereby acknowledged,

doth hereby grant and release unto the said party of the second part, and to his heirs and assigns forever, all (*description*).

TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises.

TO HAVE AND TO HOLD the above granted premises unto the said party of the second part, his heirs or assigns forever.

PROVIDED ALWAYS, That if *John Doe,* the said party of the first part, his heirs, executors or administrators, shall pay unto the said party of the second part, his executors, administrators or assigns, the said sum of money mentioned in the condition of the said bond or obligation and the interest thereon, at the time and in the manner mentioned in the said condition, that then these presents and the estate hereby granted shall cease, determine, and be void.

AND the said party of the first part covenants with the party of the second part as follows:

First. That the party of the first part will pay the indebtedness as hereinbefore provided, and if default be made in the payment of any part hereof, the party of the second part shall have power to sell the premises therein described, according to law.

Second. That the party of the first part will keep the buildings on the said premises insured against loss by fire, for the benefit of the mortgagee.

Third. And it is hereby expressly agreed that the whole of said principal sum shall become due, at the option of the said party of the second part, after default in the payment of interest for thirty days, or after default in the payment of any tax or assessment three months after notice and demand.

IN WITNESS WHEREOF, the said party of the first part has hereunto set his hand and seal the day and year first above written.

In presence of

WILLIAM JONES.

JOHN DOE. [SEAL]

STATE OF NEW YORK,
CITY OF ALBANY, } ss.
COUNTY OF ALBANY,

On the *first* day of *January,* in the year nineteen hundred and six, before me personally came *John Doe,* to me known and known to me to be the individual described in, and who executed the foregoing instrument and acknowledged that he executed the same.

[SEAL] JOHN WILLIAMS,
Notary Public.

Date of Commission.

Form of Warranty Deed for Pennsylvania

THIS INDENTURE, made the first day of January, in the year of our Lord one thoustnd nine hundred and six, between *John Doe* of the Township of Radmor, in the County of Delaware and State of Pennsylvania, Conveyancer, and *Mary Doe,* his wife, of the one part, grantors, and *Richard Roe,* of the City of Philadelphia, of the other part, grantee:

WITNESSETH, That the grantors for and in consideration of the sum of one thousand dollars lawful money of the United States of America, unto us well and truly paid by the grantee at or before the sealing and delivery hereof, the receipt whereof is hereby acknowledged, have granted, bargained and sold, released and confirmed, and by these presents do grant, bargain and sell, release and confirm unto the grantee and his assigns (insert description).....

TOGETHER with all and singular the Improvements, Ways, Streets, Alleys, Passages, Waters, Water-Courses, Rights, Liberties, Privileges, Hereditaments and Appurtenances whatsoever unto the hereby granted premises belonging or in any wise appertaining, and the Reversion and Remainders, Rents, Issues and Profits thereof; and all the Estate, Right, Title, Interest, Property, Claim and Demand whatsoever, or us, the grantors, as well at law as in equity, of, in and to the same.

TO HAVE AND TO HOLD Hereditments and premises hereby granted, or mentioned and intended so to be, with the appurtenances unto the grantee, his heirs and assigns, to and for the only proper use and behoof of the grantee and his heirs and assigns forever.

AND the said John Doe and Mary Doe, their heirs, executors and administrators, do covenant, promise and agree, to and with the grantee and assigns, by their presents, that said grantors and their heirs, all and singular the hereditaments and premises hereby granted, or mentioned and intended so to be with the appurtenances, unto the grantee, his heirs and assigns, against themselves and their heirs and against all and every person and persons whosoever lawfully claiming or to claim the same or any part thereof, by, from or under them or any of them, shall and will warrant and forever defend.

IN WITNESS WHEREOF, they have hereunto set their hands and seals. Dated the day and year first above written.

JOHN DOE. (Seal)
MARY DOE. (Seal)

SEALED AND DELIVERED in the presence of us,

PETER SIMS,
JOHN ROBINSON. } to both.

RECEIVED, on the day of the date of the above Indenture, of the above-named grantee, Richard Roe, one thousand dollars.

JOHN DOE.
MARY DOE.

Witness at signing,
PETER SIMS,
JOHN ROBINSON.

On the first day of January, Anno Domini 1906, before me the subscriber personally appeared the above named John Doe and Mary Doe and in due form of law acknowledged the above Indenture to be their act and deed, and desired the same might be recorded as such. Witness my hand and Notarial seal the day and year aforesaid.

(Notarial seal)

JOHN BROWN,
Notary Public.

Form of Mortgage Deed for Pennsylvania

THIS INDENTURE, Made the first day of January in the year of our Lord one thousand nine hundred and six between *John Doe,* of Philadelphia, in the County of Philadelphia, and State of Pennsylvania (hereinafter called the Mortgagor), of the one part, and *Richard Roe,* of Pittsburg, in the County of Alleghany, and State of Pennsylvania (hereinafter called the Mortgagee), of the other part.

WHEREAS, the said Mortgagor, in and by his Obligation or Writing obligatory under his hand and seal duly executed, bearing even date herewith, stands bound unto the said Mortgagee in the sum of Two thousand dollars lawful money of the United States of America, conditional for the payment of the just sum of two thousand dollars lawful money aforesaid, in three years from this date, together with interest payable semi-annually at the rate of six per cent. per annum, without any fraud or further delay; and for the production to the said Mortgagee, or his Executors, Administrators or Assigns, on or before the last day of December of each and every year, or receipts for all taxes of the current year assessed upon the mortgaged premises. *PROVIDED,* however, and it is thereby expressly agreed, that, if at any time default shall be made in the payment of interest as aforesaid, for the space of thirty days after any payment thereof shall fall due, or in such production to the Mortgagee or his Executors, Administrators or Assigns, on or before the last day of December of each and every year of such receipts for such taxes of the current year upon the premises mortgaged, then and in such case the whole principal debt aforesaid shall, at the option of the said Mortgagee or his Executors, Administrators or Assigns, become due and payable immediately; and payment of said principal debt, and all interest thereon, may be enforced and recovered at once, anything therein contained to the contrary notwithstanding. *AND PROVIDED FURTHER* however, and it is thereby expressly agreed, that if, at any time thereafter, by reason of any default in payment, either of said principal sum at maturity, or of said interest, or in production of said receipts for taxes, within the time specified, a Writ of Fieri Facias is properly issued upon the judgment obtained upon said Obligation, or by virtue of said Warrant of Attorney, or a writ of Scire Facias is properly issued upon this Indenture of Mortgage, an Attorney's commission for collection, viz.: ten per cent., shall be payable, and shall be recovered in addition to all principal and interest besides costs of suit, as in and by the said recited Obligation and the condition thereof, relation being thereunto had, may more fully and at large appear.

NOW THIS INDENTURE WITNESSETH, That the said Mortgagor as well for and in consideration of the aforesaid debt or principal sum of two thousand dollars and for the better securing the payment of the same, with interest as aforesaid, unto the said Mortgagee or his Executors, Administrators and Assigns, in discharge of the said recited Obligation, as for and in consideration of the further sum of One Dollar unto him in hand well and truly paid by the said Mortgagee at and before the sealing and delivery hereof, the receipt whereof is hereby acknowledged,

has granted, bargained, sold, aliened, enfeoffed, released and confirmed, and by these presents does grant, bargain, sell, alien, enfeoff, release and confirm unto the said Mortgagee, his Heirs and Assigns,

TOGETHER with all and singular the Ways, Waters, Water-courses, Rights, Liberties, Privileges, Improvements, Hereditaments and Appurtenances whatsoever thereunto belonging, or in anywise appertaining, and the reversions and Remainders, Rents, Issues and profits thereon.

TO HAVE AND TO HOLD the said Hereditaments and Premises hereby granted or mentioned and intended so to be with the Appurtenances unto the said Mortgagee, his Heirs and Assigns, to and for the only proper use and behoof of the said Mortgagee, his Heirs and Assigns forever.

Provided always, nevertheless, that if the said Mortgagor, his Heirs, Executors, Administrators or Assigns, do and shall well and truly pay or cause to be paid, unto the said Mortgagee, his Executors, Administrator or Assigns, the aforesaid debt or principal sum of two thousand dollars on the day and time hereinbefore mentioned and appointed for payment of the same, together with interest as aforesaid, and shall produce to the said Mortgagee or his Executors, Administrators or Assigns, on or before the last day of December of each and every year, receipts for all taxes of the current year assessed upon the mortgaged premises, without any fraud or further delay, and without deduction, defalcation, or abatement to be made of anything herein mentioned, to be paid or done, that then, and from thenceforth, as well this present INDENTURE, and the estate hereby granted, as the said recited Obligation shall cease, determine and become void, anything hereinbefore contained to the contrary thereof, in anywise notwithstanding.

AND PROVIDED ALSO, that it shall and may be lawful for the said Mortgagee, his Executors, Administrators or Assigns, when and as soon as the principal debt or sum hereby secured shall become due and payable as aforesaid, or in case default shall be made for the space of thirty days in the payment of interest on the said principal sum after any payment shall fall due, or in case there shall be default in production to the said Mortgagee or his Executors, Administrators or Assigns, on or before the last day of December of each year, of such receipts for such taxes of the current year assessed upon the mortgaged premises to sur out forthwith a Writ of Writs or Scire Facias upon this Indenture of Mortgage and to proceed thereon to judgment and execution, for the recovery of the whole of said principal debt, and all interest due thereon, together with an attorney's commission for collection, viz.: ten per cent., besides costs of suit, without further stay, any law, usage or custom to the contrary notwithstanding.

IN WITNESS WHEREOF, the said parties to these presents have hereunto interchangeably set their hands and seals. Dated the day and year first above written.

JOHN DOE. (Seal)

SEALED AND DELIVERED
in the presence of us.

On the first day of January, A. D. 1906, before me, Albert Brown, a Notary Public, personally appeared the above-named John Doe, and

in due form of law acknowledged the above Indenture of Mortgage to be his act and deed, and desired the same might be recorded as such.

WITNESS my hand and notarial seal the day and year aforesaid.

ALBERT BROWN,
Notary Public.

Form of Quitclaim Deed for Vermont

KNOW ALL MEN BY THESE PRESENTS, That I, *John Doe,* of Brattleboro, in the County of Windham and Sate of Vermont, in consideration of the sum of One Thousand Dollars received to my full satisfaction of Richard Roe, the receipt whereof I do hereby acknowledge, have and do hereby freely remise, release and forever QUIT-CLAIM unto the said Richard Roe, his heirs and assigns, forever, all my right, title, interest, or demand, in or unto a certain piece of land, in (description) .....

TO HAVE AND TO HOLD the above granted and bargained premises, with the privileges thereunto belonging, to the said Richard Roe, his heirs and assigns, to his and their own proper use, benefit and behoof forever.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this twentieth day of February, in the year of our Lord one thousand nine hundred and six.

JOHN DOE. (Seal)

Signed, sealed and delivered in presence of }
WILLIAM SMITH,
JOHN JONES.

STATE OF VERMONT, } *ss.*
Windham County. }

Personally appeared this 20th day of February, A. D. 1906, John Doe, the signer and sealer of the above written instrument, and acknowledged the same to be his free act and deed, before me,

WILLIAM PARKER,
Justice of the Peace.

Form of Warranty Deed for Vermont

KNOW ALL MEN BY THESE PRESENTS, That I, John Doe, of Brattleboro, in the County of Windham and State of Vermont, in consideration of the sum of One Thousand dollars, received to my full satisfaction of Richard Roe of Brattleboro, in the County of Windham and State of Vermont, the receipt whereof I do hereby acknowledge, have given, granted, bargained and sold, and by these presents, do give, grant, bargain, sell, alien, release, convey and confirm unto the said Richard Roe, his heirs and assigns forever, a certain piece or parcel of land, situate, lying or being in (description) .....

TO HAVE AND TO HOLD the above granted and bargained premises, with the privileges and appurtenances thereunto belonging to the said Richard Roe, his heirs and assigns, to his and their own proper use, benefit and behoof forever. And I, the said John Doe, for myself and

my heirs, executors, administrators and assigns, do covenant to and with the said Richard Roe, his heirs, executors, administrators and assigns, that at and until the ensealing of these presents I am well seized of the premises in fee simple; that I have good right and lawful authority to sell and convey the same to the said Richard Roe in manner and form aforesaid; that they are free of all incumbrances; and that I will warrant and defend the same to the said Richard Roe, his heirs and assigns, against all lawful claims and demands of any person or persons whatsoever.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this twentieth day of February, in the year of our Lord one thousand nine hundred and six.

JOHN DOE. (Seal)

Signed, sealed and delivered in presence of
JOHN SMITH,
JOSEPH JONES.

STATE OF VERMONT, Windham County. } *ss.*

Personally appeared this twentieth day of February, A. D. 1906, John Doe, the signer and sealer of the above written instrument, and acknowledged the same to be his free act and deed, before me,

WILLIAM PARKER,
Justice of the Peace.

Form of Mortgage Deed for Vermont

KNOW ALL MEN BY THESE PRESENTS, That I, John Doe, of Brattleboro, in the County of Windham and State of Vermont, in consideration of the sum of One Thousand dollars, received to my full satisfaction of Richard Roe, of Brattleboro, in the County of Windham and State of Vermont, the receipt whereof I do hereby acknowledge, have given, granted, bargained and sold, and by these presents, do give, grant, bargain, sell, alien, release, convey and confirm unto the said Richard Roe, his heirs and assigns forever, a certain piece or parcel of land, situate, lying or being in ..... (description) .....

TO HAVE AND TO HOLD the above granted and bargained premises, with the privileges and appurtenances thereunto belonging to the said Richard Roe, his heirs and assigns, to his and their own proper use, benefit and behoof forever. And I, the said John Doe, for myself and my heirs, executors, administrators and assigns, do covenant to and with the said Richard Roe, his heirs, executors, administrators and assigns, that at and until the ensealing of these presents I am well seized of the premises in fee simple; that I have good right and lawful authority to sell and convey the same to the said Richard Roe in manner and form aforesaid; that they are free of all incumbrances; and that I will warrant and defend the same to the said Richard Roe, his heirs and assigns, against all lawful claims and demands of any person or persons whatsoever.

PROVIDED, NEVERTHELESS, That I, the said John Doe, my heirs, executors, administrators or assigns, shall well and truly pay, or cause

to be paid to the said Richard Roe, his heirs, executors, administrators or assigns, One Thousand Dollars as specified in a certain promissory note of even date herewith payable on demand with interest annually, and shall at all times keep the buildings on said land satisfactorily insured against loss by fire, for the benefit of the mortgagee herein, and also pay when due, all taxes and assessments upon said premises, then this deed to be null and void, otherwise to remain in full force and effect. And in case of failure to keep said buildings so insured, or to pay such taxes or assessments when due, the legal holder of this mortgage shall have the right to cause such buildings to be so insured in the owner's name, and to pay such taxes and assessments when due, adding the proper expense therefor to the principal sum secured under this mortgage.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this twentieth day of February, in the year of our Lord one thousand nine hundred and six. JOHN DOE. (Seal)

Signed, sealed and delivered in presence of }
JOHN SMITH,
JOSEPH JONES.

STATE OF VERMONT, Windham County. } *ss.*

Personally appeared this twentieth day of February, A. D. 1906, John Doe, the signer and sealer of the above written instrument, and acknowledged the same to be his free act and deed.

Before me,

WILLIAM PARKER,
Justice of the Peace.

MORTGAGES

A Mortgage is a conveyance of property, either real or personal, given to secure payment of a debt, or the performance of some special act. When the debt is paid the mortgage becomes void and of no value.

Names of Parties.—The person mortgaging his property is called the mortgagor, and the person to whom the mortgage is given the mortgagee.

REAL ESTATE MORTGAGES

In real estate mortgages, as usually written, the person giving the mortgage retains possession of the property, receives all the rents and other profits and pays all taxes and other expenses until breach of condition and foreclosure.

Must be in Writing.—All real estate mortgages must be

in writing, signed and sealed. The time when the debt, to secure which the mortgage was given, is due must be plainly stated and the property conveyed must be clearly described and located.

Must be Acknowledged.—A mortgage pledging real estate must be acknowledged like a deed, before a proper public officer, and should then be recorded.

The Accompanying Bond or Note.—It is usual not only to insert a covenant of promise in the mortgage to pay the debt, but for the mortgagor to give also his bond or note as evidence of indebtedness. In this case the mortgagee may sue and recover upon the note or bond, or he can foreclose his mortgage; and if there is not sufficient realized from the sale to pay the debt he may recover the balance on the bond or note.

The bond or note is drawn precisely like any other instrument of the kind. In the case of notes, it is customary to state therein that they are secured by a mortgage of even date.

Redemption.—By what is termed equity of redemption the mortgagor is given further time to redeem his property after the debt for which the mortgage is security falls due. Within this extended time he must pay the full amount of the mortgage with the interest prescribed by the statute.

The Equity of Redemption is such a positive right that it may be sold, and is of such a character that the law refuses to allow it to be forgone, even by an agreement to that effect in the mortgage.

Power of Sale.—A power of sale is not essential to a mortgage, but it may in some States contain a clause permitting the sale of the property, if forfeited by nonpayment of debt, as required. A mortgage may be so drawn that the property can be sold without decree from the Court, according to the statutes of the State, or by agreement of the parties from the Court, according to the statutes of the State, or by agreement of the parties.

Mortgages are sometimes so drawn that a single failure in paying the interest at a stated time renders due the whole, both principal and interest, and gives the mortgagee authority to sell the property long before the debt is due.

Assignment.—A mortgage can be assigned, but unless the bond or note is also assigned is worthless and gives no right to foreclose and such assignment should include also the bond or note and should be acknowledged and recorded.

Making Payments.—If the wording in the mortgage or note is, "payable on or before" a certain date, the creditor cannot compel payment before that date (if the interest is kept up); but the debtor if so disposed can pay at any time and the creditor must accept it.

A debtor cannot compel his creditor to accept payment before it is due, because he has a right to have his money remain on interest according to agreement.

Whenever payment is made upon a note or bond or mortgage it should be carefully indorsed upon the instrument.

Foreclosure.—If the mortgagor fails to meet the conditions of the mortgage then the mortgagee may foreclose. The method of foreclosure differs in the several States. In some the statutes prescribe a short, summary method; in others an action of court is necessary; in still others either method is legal.

HOW TO FORECLOSE A MORTGAGE

The methods of foreclosing vary in different States, but the following general steps are common in many States.

1. Application to a Court for authority to foreclose.
2. Hearing the parties by the Court.
3. Referring the case to a Master in Chancery or referee.
4. Advertising the property.
5. Selling it to the highest bidder at auction.
6. Deeding it to the purchaser.
7. Mortgagee taking and retaining possession of the property.
8. Paying over any surplus fund remaining from the sale to the mortgagor.

Since the interests involved in giving and taking a mortgage on real estate are of such great importance that a mistake in executing it or in complying with its conditions may subject the interested parties to much trouble and heavy losses, the mortgage, bond and note should be drawn up with the utmost care and the conditions laid down strictly and promptly complied with.

Illinois Form of Promissory Note Secured by Mortgage

$3,000. New York, March 15, 1904.

One year after date I promise to pay to Robert Hartless Three Thousand Dollars at the First National Bank of New York City, with interest at the rate of seven per cent per annum, making such sale, on demand, to the party for value received.

This note is secured by a mortgage of even date herewith on certain real estate (*describe the premises*).

Signed, JULIUS HAWTHORNE.

Real Estate Mortgage to Secure Payment of Above Note

This Indenture, made this 15th day of March, in the year one thousand nine hundred and four, between Julius Hawthorne, of the City, County, and State of New York, and Margaret, his wife, parties of the first part, and Robert Hartless, of the City of Chicago, County of Cook, and State of Illinois, party of the second part,

Witnesseth, That the said party of the first part, for and in consideration of the sum of Three Thousand Dollars, does grant, bargain, sell, and convey unto the said party of the second part and to his heirs and assigns all, (*give a complete description of the premises mortgaged*), together with all the hereditaments and appurtenances thereto belonging or in anywise appertaining.

This conveyance is intended as a mortgage to secure the payment of the above note according to the condition of the same, and these presents shall be void if such payment be made.

But in case default shall be made in the payment of the principal or interest as above provided, then the party of the second part, his executors, administrators, and assigns, are hereby empowered to sell the premises above described, with all and every of the appurtenances or any part thereof, in the manner prescribed by law, and out of the money arising from such sale to retain the said principal and interest, together with the costs and charges of making such sale, and the surplus if any there be shall be paid by the party making such sale, on demand, to the party of the first part, his heirs or assigns, etc.

In witness whereof said party of the first part hereunto set their hands and seals the day and year first above written.

JULIUS HAWTHORNE, [SEAL]
MARGARET HAWTHORNE. [SEAL]

Signed, sealed, and delivered
in presence of
WALTER MAY,
HARVEY JONES.

Ohio Form of Mortgage—Short Form

The Mortgagor, *George E. Arnold* and *Charlotte Arnold, his wife,* of the town of Wooster, in the County of *Wayne* and State of Ohio, *Mortgage* and *Warrant* to John Randolph, of the same place, to secure the

payment of *a certain promissory note for the sum of One Thousand Dollars, payable to the order of the said John Randolph in two years from the date thereof, with interest at the rate of six per cent per annum, payable semi-annually,* the following described Real Estate: *Lots number one* (1), *two* (2), *and three* (3) in Block No. fifteen (15) of Carter's Addition to the Town of Wooster, in the County of Wayne and State of Ohio, hereby releasing and waiving all rights under and by virtue of the Homestead Exemption Laws of this State.

Dated this 4th day of May, A. D. 1904.

GEORGE E. ARNOLD, [SEAL]
CHARLOTTE ARNOLD. [SEAL]

Signed, sealed, and delivered
in presence of
ARTHUR B. LOWE.
HARRY N. STEVENS.

Release and Satisfaction of Mortgage

Know all Men by These Presents, That the debt secured by mortgage upon the following described —— property, situated in ——, in —— County, in the State of ——, to-wit: (*describing it*), wherein Chas. Anderson is grantor and Fred Johnson is grantee, and dated ——, a —— of which is —— in volume ——, page ——, in the office of the (*register or recorder*) of deeds of —— County, ——, has been fully satisfied, in consideration of which said mortgage is hereby released.

FRED JOHNSON.

Witness: ————.

Form of Mortgage for Maine

KNOW ALL MEN BY THESE PRESENTS, That I, *John Doe* of *Portland,* in the County of *Cumberland* and State of *Maine,* in consideration of *One Thousand* Dollars paid by *Richard Roe* of said *Portland,* the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said *Richard Roe,* his Heirs and Assigns forever, (*description of land*).

TO HAVE AND TO HOLD the aforegranted and bargained premises, with all the privileges and appurtenances thereof to the said *Richard Roe* his Heirs and Assigns, to their use and behoof forever.

AND I do COVENANT with the said Grantee, his Heirs and Assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances; that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my Heirs, shall and will WARRANT AND DEFEND the same to the said Grantee, his Heirs and Assigns forever, against the lawful claims and demands of all persons.

PROVIDED NEVERTHELESS, That if the said *John Doe,* his Heirs, Executors, or Administrators pay to the said *Richard Roe,* his Heirs, Executors, Administrators or Assigns the sum of *One Thousand* Dollars in *three* years from the day of the date hereof, with interest on said sum

at the rate of *six* per centum per annum; during said term and for such further time as said principal sum or any part thereof shall remain unpaid, payable semi-annually, then this Deed, as also *one* certain promissory note bearing even date with these presents, given by the said *John Doe* to the said *Richard Roe,* to pay the sum and interest at the time aforesaid, shall be void, otherwise shall remain in full force.

And the said Grantor hereby covenants and agrees with the said Grantee that the right of redeeming the above mortgaged premises shall be forever foreclosed in one year next after the commencement of foreclosure by any of the methods now provided by law.

In Witness Whereof, We, the said *John Doe* and *Mary Doe,* wife of the said *John Doe* joining in this deed as Grantor, and relinquishing and conveying her rights by descent and all her other rights in the above described premises have hereunto set our hands and seals this *first* day of *January,* in the year of our Lord One thousand nine hundred and *six.*

John Doe, [seal]
Mary Doe, [seal]

Signed, sealed and delivered
in presence of

.....
.....

State of Maine,
County of Cumberland, } ss.

January 1, 1906.

Personally appeared the above named John Doe and acknowledged the foregoing instrument to be his free act and deed.

Before me,

Thomas King,
Justice of the Peace.

Form of Mortgage for Massachusetts

Know All Men by These Presents, That I, *John Doe* of *Boston,* in the county of *Suffolk* and Commonwealth of *Massachusetts,* in consideration of *One thousand* dollars paid by *Richard Roe* of *Springfield,* in the County of *Hampden* and said Commonwealth, the receipt whereof is hereby acknowledged, do hereby give, grant, bargain, sell and convey unto the said Richard Roe a certain parcel of land (*describe the land*).

To Have and to Hold the granted premises, with all the privileges and appurtenances thereto belonging, to the said *Richard Roe* and his heirs and assigns to their own use and behoof forever.

And I hereby for myself and my heirs, executors and administrators, covenant with the grantee and his heirs and assigns that I am lawfully seized in fee-simple of the granted premises; that they are free from all incumbrances; that I have good right to sell and convey the same as aforesaid; and that I will and my heirs, executors and adminstrators shall warrant and defend the same to the grantee and his heirs and assigns forever against the lawful claims and demands of all persons.

Provided Nevertheless that if I, or my heirs, executors, administrators, or assigns, shall pay unto the grantee or his executors,

administrators, or assigns, the sum of *One Thousand* dollars in *three* years from this date, with interest semi-annually at the rate of *six* per cent per annum, and until such payment shall pay all taxes and assessments, to whomsoever laid or assessed whether on the granted premises or on any interest thereon, or on the debt secured hereby; shall keep the buildings on said premises insured against fire, in a sum not less than *One Thousand* dollars for the benefit of the grantee and his executors, administrators, and assigns, in such form and at such insurance offices as they shall approve, and, at least two days before the expiration of any policy on said premises, shall deliver to him or them, a new and sufficient policy to take the place of the one so expiring; and shall not commit or suffer any strip or waste of the granted premises, or any breach of any covenant herein contained; then this deed, as also *one* note of even date herewith, signed by me whereby I promise to pay to the grantee or order the said principal sum and instalments of interest at the times aforesaid, shall be void.

BUT UPON ANY DEFAULT in the performance or observance of the foregoing condition, the grantee, or his executors, administrators, or assigns may SELL the granted premises, or such portion thereof as may remain subject to this mortgage in case of any partial release hereof, together with all improvements that may be thereon, by public auction in said (*the town or city wherein the premises are situated*) first publishing a notice of the time and place of sale once each week for three successive weeks in some one newspaper published in said (*the county wherein is the granted land*) the first publication of such notice to be not less than twenty-one days before the day of sale and may convey the same by proper deed or deeds to the purchaser or purchasers absolutely and in fee-simple; and such sale shall forever bar me and all persons claiming under me from all right and interest in the granted premises, whether at law or in equity. And out of the money arising from such sale the grantee or his representatives shall be entitled to retain all sums then secured by this deed, whether then or thereafter payable, including all costs, charges and expenses incurred or sustained by them by reason of any default in the performance or observance of the said condition, rendering the surplus, if any, to me or my heirs, or assigns; and I hereby for myself and my heirs and assigns, covenant with the grantee and his heirs, executors, administrators, and assigns, that, in case a sale shall be made under the foregoing power, I or they will upon request execute, acknowledge and deliver to the purchaser or purchasers a deed or deeds of release confirming such sale, and said grantee and his assigns are hereby appointed and constituted the attorney or attorneys irrevocable of the said grantor to execute and deliver to the said purchaser a full transfer of all policies of insurance on the buildings upon the land covered by this mortgage at the time of such sale.

AND IT IS AGREED that the grantee, or his executors, administrators or assigns, or any person or persons in their behalf, may purchase at any sales made as aforesaid, and that no other pur-

chaser shall be answerable for the application of the purchase money; and that until default in the performance or observance of the condition of this deed, I and my heirs and assigns may hold and enjoy the granted premises and receive the rents and profits thereof.

And for the consideration aforesaid I, *Mary Doe*, wife of the said *John Doe*, do hereby release unto the said grantee and his heirs and assigns all right of or to both dower and homestead in the granted premises and all other rights and interests therein.

In Witness Whereof, We, the said *John Doe* and *Mary Doe* hereunto set out hands and seals this *first* day of *January* in the year one thousand nine hundred and six.

John Doe, [L. S.]
Mary Doe, [L. S.]

Signed and sealed in the
presence of

. . . . . .
. . . . . .

Commonwealth of Massachusetts, }
Suffolk, } ss.

Boston, January 1, 1906.

Then personally appeared the above-named *John Doe* and acknowledged the foregoing instrument to be his free act and deed,

Before me,

John Smith,
Justice of the Peace.

Form of Bond for New York

Know All Men by These Presents, That I, *John Doe* of *Albany*, in the County of *Albany* and State of New York, am held and firmly bound unto *Richard Roe* of the City, County and State of New York, in the sum of *one thousand* dollars, lawful money of the United States, to be paid to the said *Richard Roe*, his executors, administrators or assigns, for which payment I bind myself, my heirs, executors and administrators firmly by these presents.

Sealed with my seal, dated the *first* day of *January*, 1906.

The Condition of the above Obligation is such, that if the above bounden *John Doe*, his heirs, executors or administrators, shall pay unto the above named *Richard Roe*, his executors, administrators or assigns, the sum of *one thousand* dollars the *first* day of *January*, which will be in the year nineteen hundred and *eight;* and interest thereon, to be computed from and after the date hereof, at the rate of *six* per cent. per annum, and to be paid semi-annually, then the above obligation to be void, otherwise to remain in full force and virtue.

And it is Hereby Expressly Agreed, That the whole of the said principal sum shall become due at the option of said mortgagee, or obligee, after default in the payment of interest for *thirty* days, or after default in the payment of any tax or assessment for *three months* after notice and demand.

And the said party of the first part also covenants with the party of the second part, that the party of the first part will keep the buildings

on the said premises described in the mortgage accompanying this Bond insured against loss by fire for the benefit of the mortgagee.

AND the said party of the second part shall have the right forthwith, after any such default, to enter upon and take possession of the said mortgaged premises, and receive the rents, issues and profits thereof, and apply the same, after payment of all necessary charges and expenses, on account of the principal and interest of this bond and the mortgage accompanying the same, and the said obligee and his legal representatives or assigns shall be at liberty and have the right immediately after any such default, upon a complaint filed, or any other legal proceedings commenced for the foreclosure of said mortgage, to apply for, and shall be entitled as a matter of right and without regard to the value of the premises, or the solvency or insolvency of said obligor or of any owner of the mortgaged premises, and on ten days notice to said obligor, heirs and assigns, in any court of competent jurisdiction, to have granted a receiver of the rents, issues and profits of the said mortgaged premises, with power to lease said premises for a term to be approved by the Court, with power to pay taxes and assessments and water rents which are or may become a lien on said premises, and keep the same insured, and with power to take proceedings to dispossess tenants, and make all necessary repairs, and with such other powers as may be deemed necessary; who, after deducting all charges and expenses attending the execution of the said trust as receiver, shall apply the residue of said rents and profits to the payment and satisfaction of this bond, and the mortgage accompanying the same, or to any deficiency which may arise after applying the proceeds of the sale of said premises to the amount due, including interest and costs, and expenses of the foreclosure and sale.

In presence of

JOHN SMITH.

JOHN DOE. [SEAL]

STATE OF NEW YORK,
CITY OF ALBANY, } ss.
COUNTY OF ALBANY,

On the *first* day of *January*, in the year nineteen hundred and six, before me personally came *John Doe*, to me known and known to me to be the individual described in, and who executed the foregoing instrument and acknowledged that he executed the same.

[SEAL] JOHN JONES,
Notary Public.

Form of Bond and Warrant for Pennsylvania

KNOW ALL MEN BY THESE PRESENTS, That I, John Doe, of Philadelphia, in the County of Philadelphia, and State of Pennsylvania (hereinafter called the obligor) am held and firmly bound unto Richard Roe, of Pittsburg in the County of Alleghany and State of Pennsylvania (hereinafter called the Obligee), in the sum of two thousand dollars lawful money of the United States of America, to be paid to the said Obligee, his certain Attorney, Executors, Administrators or Assigns: to which payment well and truly to be made, I do bind and oblige myself, my Heirs, Executors and Administrators, firmly by these Presents. Sealed

with my Seal. Dated the first day of January in the year of our Lord one thousand nine hundred and six.

THE CONDITION OF THIS OBLIGATION IS SUCH, That, if the above bounden Obligor, his Heirs, Executors or Administrators, or any of them, shall and do well and truly pay, or cause to be paid unto the above-named Obligee, his certain Attorney, Executors, Administrators or Assigns, the just sum of two thousand dollars, lawful money as aforesaid, in three years from this date together with interest thereon payable semi annually at the rate of six per cent. per annum without any fraud or further delay: and shall produce to the said Obligee or his Executors, Administrators or Assigns, on or before the last day of December of each and every year receipts for all taxes of the current year assessed upon the mortgaged premises; then the above Obligation to be void, or else to be and remain in full force and virtue. *Provided,* however, and it is hereby expressly agreed, that if at any time default shall be made in payment of interest as aforesaid, for the space of thirty days after any payment thereof shall fall due, or in such production to the Obligee or his Executors, Administrators or Assigns, on or before the last day of December of each and every year, of such receipt for such taxes of the current year upon the premises mortgaged, then and in such case the whole principal debt aforesaid, shall, at the option of the said Obligee, his Executors, Administrators or Assigns, become due and payable immediately, and payment of said principal debt and all interest thereon, may be enforced and recovered at once, anything herein contained to the contrary notwithstanding. AND PROVIDED FURTHER, however, and it is hereby expressly agreed, that if at any time hereafter, by reason of any default in payment, either of said principal sum at maturity, or of said interest, or in production of said receipts for taxes, within the time specified, a writ of Fieri Facias is properly issued upon the judgment obtained upon this Obligation, or by virtue of a warrant of attorney hereto attached, or a writ of Scire Facias is properly issued upon the accompanying Indenture of Mortgage, an attorney's commission for collection, viz: ten per cent. shall be payable, and shall be recovered in addition to all principal and interest then due, besides costs of suit.

JOHN DOE (Seal.)

SEALED AND DELIVERED }
in the presence of us, }

To John Smith, Esq., Attorney of the Court of Common Pleas, at Philadelphia, in the County of Philadelphia, in the State of Pennsylvania, or to any other Attorney of the said Court, or any other Court there or elsewhere.

WHEREAS, John Doe of said Philadelphia in and by a certain Obligation, bearing even date herewith, doth stand bound unto Richard Roe of Pittsburg in the County of Alleghany and State of Pennsylvania in the sum of two thousand dollars lawful money of the United States of America, conditional for the payment of the just sum of two thousand dollars lawful money as aforesaid, in three years from date, together with interest payable semi annually at the rate of six per cent. per annum, and for the production to the Obligee or his Execu-

tors, Administrators or Assigns, on or before the last day of December of each and every year, of receipts for all taxes of the current year assessed upon the premises described in the Mortgage accompanying said Obligation:

PROVIDED, however, and it is hereby expressly agreed, that, if at any time default shall be made in payment of interest of aforesaid, for the space of thirty days after any payment thereof shall fall due, or in such production of the Obligee or his Executors, Administrators or Assigns, on or before the last day of December of each and every year, of such receipts for such taxes of the current year assessed upon the premises described in the Mortgage accompanying said Obligation, then and in such case the whole principal debt aforesaid, shall, at the option of the said Obligee, his Executors, Administrators or Assigns, become due and payable immediately, and payment of said principal debt, and all interest thereon, may be enforced and recovered at once, any thing therein contained to the contrary notwithstanding. AND PROVIDED FURTHER, however, and it is thereby expressly agreed, that if at any time hereafter, by reason of any default in payment, either of said principal sum at maturity, or of said interest, or in production of said receipts for taxes within the time specified, a writ of Fieri Facias is properly issued upon the Judgment obtained upon said Obligation, or by virtue of this Warrant, or a writ of Scire Facias is properly issued upon the accompanying Indenture of Mortgage, an attorney's commission for collection, viz: ten per cent. shall be payable, and shall be recovered in addition to all principal and interest then due, besides cost of suit. THESE are to desire and authorize you, or any of you, to appear for me, my Heirs, Executors or Administrators, in the said Court or elsewhere, in an action of assumpsit there or elsewhere brought or to be brought against me, my Heirs, Executors or Administrators, at the suit of the said Obligee, his Executors, Administrators or Assigns, on the said Obligation, as of any term of time past, present, or any other subsequent term of time, there or elsewhere to be held, and confess judgment thereupon against me, my Heirs, Executors or Administrators, for the sum of two thousand dollars lawful money of the United States of America, debt, besides costs of suit, and an attorney's commission of ten per cent. in case payment has to be enforced by process of law as aforesaid, by Non sum information, Nihil dicit, or otherwise, as to you shall seem meet: and for your, or any of your so doing, this shall be your sufficient warrant. And I do hereby for myself, my Heirs, Executors and Administrators, remise, release, and forever quit claim unto the said Obligee, his certain Attorney, Executors, Administrators and Assigns all and all manner of error and errors, misprisions, misentries, defects and imperfections whatever, in the entering of the said judgment, or any process or proceedings thereon or thereto, or anywise touching or concerning the same.

IN WITNESS WHEREON, I have hereunto set my hand and seal the first day of January in the year of our Lord one thousand nine hundred and six.

SEALED AND DELIVERED. }
in the presence of us, } JOHN DOE. (Seal.)

CHATTEL MORTGAGES

A Chattel Mortgage is a mortgage on personal property. Persons sometimes desire to use their personal property as security and yet retain possession of it, as, for instance, furniture, machinery, tools, a library, etc. This can be done by giving a chattel mortgage, which is really a conditional sale of the property, to the creditor, whose the property becomes if the debt is not paid when due.

Rules Governing Chattel Mortgages

1. A chattel mortgage must, in some of the States, be acknowledged or sworn to before a justice of the peace or before the County Judge. In Georgia chattel mortgage or mortgages on personal property are governed by the same rules as to attestation and record as realty mortgages.

2. It runs out in two years or such other time as prescribed by the State statute. Frequently the Statute provides for renewing the mortgage for another specified period or term by recording or filing certain papers, and in some States, e. g. in New England, the mortgage does not run out by lapse of time at all.

3. No seal is necessary, though commonly used, in a chattel mortgage.

4. A person cannot mortgage property which he does not own. Hence a chattel mortgage made by a merchant upon all goods which he may hereafter purchase is held in some States to be of no effect or to be effective only in a qualified way. In other States, however, such provision is held to be effective.

5. If the mortgagor retains possession, the instrument is of no avail as against third parties unless recorded in accordance with the law of the State where it is made.

6. In some States where the mortgage lien runs out in a specified time fixed by Statute or at maturity, the property must be taken possession of by the mortgagor at the expiration of such time or at maturity, or other creditors can claim the property.

7. In some States if the debt is not paid when due the property becomes the creditor's and the debtor is entitled to no surplus, but in most States the creditor, in order to enforce his lien on the goods, must foreclose the mortgage by sale, either under a power of sale contained in the mortgage or by similar proceedings provided by Statute. There usually is a provision for notice to the owner. If the sale produce a surplus, this surplus goes to the owner or to his assigns.

8. It is a criminal offense for the mortgagor to sell the property covered by a chattel mortgage unless by consent of mortgagee in mortgage or otherwise.

9. Mortgages of personal property should have a clause providing for the equity of redemption.

10. A mortgagee may sell or transfer his mortgage to another, but the purchaser cannot sell the property until the mortgage matures.

Chattel Mortgage, with Power of Sale

Know all Men by These Presents, That I, John F. Thomas, of the City of Wilmington, State of Delaware, in consideration of five hundred dollars to me paid by Henry A. Davis, of the city and State aforesaid, the receipt of which is hereby acknowledged, do hereby grant, bargain, and sell unto the said Henry A. Davis, and his assigns, forever, the following goods and chattels, to wit:

[*Here insert an accurate list of the articles mortgaged, giving a full description of each.*]

To Have and To Hold, All and singular the said goods and chattels unto the mortgagee herein, and his assigns, to their sole use and behoof forever. And the mortgagor herein, for himself and for his heirs, executors, and administrators, does hereby covenant to and with the said mortgagee and his assigns, the said mortgagor is lawfully possessed of the said goods and chattels, as of his own property; that the same are free from all incumbrances, and that he will warrant and defend the same to him, the said mortgagee and his assigns, against the lawful claims and demands of all persons.

Provided, Nevertheless, That if the said mortgagor shall pay to the mortgagee, on the tenth day of May, in the year 1905, the sum of five hundred dollars, then this mortgage is to be void, otherwise to remain in full force and effect.

And Provided Further, That until default be made by the said mortgagor in the performance of the condition aforesaid, it shall and may be lawful for him to retain the possession of the said goods and chattels, and to use and enjoy the same; but if the same or any part thereof shall be attached or claimed by any other person or persons at any

time before payment, or the said mortgagor, or any person or persons whatever, upon any pretense, shall attempt to carry off, conceal, make way with, sell, or in any manner dispose of the same or any part thereof, without the authority and permission of the said mortgagee or his executors, administrators, or assigns, in writing expressed, then it shall and may be lawful for the said mortgagee, with or without assistance, or his agent or attorney, or his executors, administrators, or assigns to take possession of said goods and chattels, by entering upon any premises wherever the same may be, whether in this county or State, or elsewhere, to and for the use of said mortgagee or his assigns. And if the moneys hereby secured, or the matters to be done or performed, as above specified, are not duly paid, done, or performed at the time and according to the conditions above set forth, then the said mortgagee, or his attorney or agent, or his executors, administrators, or assigns, may by virtue hereof, and without any suit or process, immediately enter and take possession of said goods and chattels, and sell and dispose of the same at public or private sale, and after satisfying the amount due, and all expenses, the surplus, if any remain, shall be paid over to said mortgagor or his assigns. The exhibition of this mortgage shall be sufficient proof that any person claiming to act for the mortgagee is duly made, constituted, and appointed agent and attorney to do whatever is above authorized.

In Witness Whereof, The said mortgagor has hereunto set his hand and seal this tenth day of May, in the year of our Lord one thousand nine hundred and four.

JOHN F. THOMAS. [SEAL]

Sealed and delivered
in presence of
WILLIAM WISE,
HARRISON WOOL.

STATE OF DELAWARE, } *ss.*
Sussex County. }

This mortgage was acknowledged before me by J. F. Thomas, this tenth day of May, A. D. 1904.

ANDREW WHITE,
Justice of the Peace.

N. B. In Tennessee a chattel mortgage is not valid against creditors of the mortgagor until registered; nor against purchasers from the mortgagor until registered, unless the purchaser had actual notice of the prior mortgage. The mortgagor may remain in possession of the mortgaged chattels, if they are not necessarily consumable in their use, and it will be no badge of fraud until after the maturity of the debt.

FARM LEASES

While the foregoing laws are of general application to landlords and tenants, some additional features pertaining to farm leases demand special attention.

General Duties of Farm Tenants.—A tenant of a farm is bound without a special clause in the lease to cultivate the land, and generally so to manage all the affairs of the farm as good husbandry requires, and as is the custom in the vicinity.

Crops.—As a general rule when no time is specified at which the tenancy shall cease, the tenant is entitled to the so-called "away-going crops," or crops of the present season, but when the time is fixed and certain the tenant is not entitled to such crops, because he knew when he sowed that he took the risk of getting his crops off before the termination of his term. It is also held that the tenant leaving is entitled only to the annual productions of the soil raised by his own labor, which does not include the permanent and natural products of the earth, such as trees, fruits of the orchard, natural grasses and the like. Local usages of the country are, however, largely taken into consideration here, and special statutes of the States may vary greatly in this respect.

Manure.—It is a general law that manure upon a leased farm cannot be removed by the outgoing tenant.

Fixtures.—The question as to what constitute fixtures on a farm is a broad one, and we can only say that respecting this the rules are liberal in favor of the tenant. It is stated in a general way that a tenant may sever and remove at any time all such fixtures of a chattel nature as he has himself erected or placed upon the rented premises for the purpose of *ornament, domestic convenience,* or *to carry on a certain trade;* such may be in some cases engines, machinery or buildings erected by him for such machinery.

Taxes.—The tenant in possession is generally considered as liable for the taxes, but without special agreement he is under no obligation to his landlord to pay the taxes. This statutory liability varies in different States.

Good Advice.—No class of litigation is more intricate and technical than that of landlord and tenant. It should there-

fore be avoided if possible. In order to do so have your lease carefully executed, specifying as far as possible all details of conditions, and then observe them carefully. If, however, any one, be he landlord or tenant, anticipates difficulty, then we advise him to secure the services of a competent lawyer to help him if possible to avert the litigation or to conduct it for him.

"Law and justice are two things which God has joined but man has put asunder."

Lease of a Farm

This Indenture, made this first day of March, 1904, between Chas. Ortland, of the township of Lisle, County of Dupage, and State of Illinois, of the first part, and John Burgess, of the said township and county, of the second part,

Witnesseth, That the said Chas. Ortland, for and in consideration of the yearly rents and covenants hereinafter mentioned and reserved on the part and behalf of the said Chas. Ortland, his heirs, executors, and administrators to be paid, kept, and performed, hath demised, set, and to farm let, and by these presents doth demise, set, and to farm let unto the said John Burgess, his heirs and assigns, all that certain piece, parcel, or tract of land situated, lying, and being in the township of Lisle aforesaid, known as lot No. [*description of farm here*], now in the possession of John Hartman, containing three hundred acres, together with all buildings and improvements, to have and to hold the same unto the said John Burgess, his heirs, executors, and assigns, from the first day of May next, for and during the term of five years next ensuing, and fully to be complete and ended, yielding and paying for the same unto the said Chas. Ortland, his heirs and assigns, the yearly rent or sum of One Thousand Dollars on the first day of May in each and every year during the term aforesaid, and at the expiration of said term or sooner if determined upon, he the said John Burgess, his heirs or assigns, shall and will quietly and peacefully surrender and yield up said premises with the appurtenances unto the said Chas. Ortland, his heirs and assigns, in as good order and repair as the same are now, reasonable wear, tear, and casualties which may happen by fire or otherwise only excepted.

In witness whereof we have hereto set our hands and seals.

CHAS. ORTLAND, [SEAL]
JOHN BURGESS. [SEAL]

Signed, sealed, and delivered in presence of
WILLIAM KLINK.

A Lease of Real Estate

This Indenture, made this third day of January, A. D. 1904, between William Caxton of the Town of Centralia, in the County of Marion and State of Illinois, of the first part, and Chas. Riley of the Town of Salem, in the county and State aforesaid, of the second part. Witnesseth, that the said William Caxton, for the consideration hereinafter named, hath demised, granted, and leased and doth by these presents hereby demise, grant, and lease unto the said Chas. Riley and his assigns Lots five (5) and six (6) in Block eight (8) of the original Town of Centralia, as shown by the plat of said town. Also the southeast quarter (S. E. ¼) of Section six (6), in Township ten (10),

Range seven (7), west of fourth Principal Meridian, and containing eighty (80) acres, according to government survey, together with all the privileges and appurtenances belonging thereto, to have and to hold the above described premises for and during the time of three years from the date hereof.

And the said Chas. Riley doth covenant and agree to pay the said William Caxton or his assigns the sum of Nine Hundred Dollars as yearly rent for said premises, in three equal payments of Three Hundred Dollars each, at the expiration of every four months from date, during the continuance of this lease.

In witness whereof the said parties have to this and one other instrument of the same tenor and date interchangeably set their hands and seals the day and year first above written.

WILLIAM CAXTON, [SEAL]
CHAS. RILEY. [SEAL]

Signed, sealed, and delivered in presence of
JOHN WEIDMANN.

LICENSE

License is a special permission granted by a competent authority to a person or persons to carry on a certain trade or business, or to do certain acts, at a certain place, within a certain district, city, town, or village, on the payment of a special tax or premium for such privileges.

The trades, vocations and professions for which licenses are granted are of great variety. They are regulated by statutes and ordinances of city governments, which provide restrictions and fix penalties for violating the conditions of the license by misrepresentation or other fraudulent practice.

A license is liable to be recalled or canceled by the authorities who have issued the same, either in accordance with a fixed date or because of some violation by the licensed person.

Canvassers and Drummers are held not to be liable to payment of a peddler's license where they simply take orders from samples of goods or prospectuses of books, etc. But where they have the goods ready for delivery they come within the definition of peddlers and must obtain a license.

Government License to sell liquor, etc., strictly speaking, is not a license, but simply a receipt for special tax. It does not authorize the sale of liquors, etc., in violation of State laws or municipal regulations.

A license may be legally granted in mere words without writing, but in such cases the presence of a competent witness is required to substantiate the same.

The following forms may serve as general models and prove of service to some interested party.

License from the Government to Retail Liquors

$20.00. Series of 1904. No. 307,850. United States stamp for special tax. Internal Revenue.

Received from William R. Howard the sum of Twenty Dollars for special tax on the business of retail liquor dealer, to be carried on at Cleveland, State of Ohio, for the periods represented by the coupon or coupons hereto attached.

: U. S. Rev. Seal. : Dated at Cleveland, Ohio, November 10, 1904.

Chas. R. Morten,
Collector 1st Dist., State of Ohio.

Severe penalties are imposed for neglect or refusal to place and keep this stamp conspicuously in your establishment or place of business.

Form of Peddler's License

By authority of the City of Chicago, permission is hereby given to Wm. O'Brien to peddle green fruit, numbered 450, from the date hereof until the first day of April next in said city, subject to the ordinances of said city in such cases made and provided and to revocation by the Mayor at any time at his discretion.

: city seal. : Witness the hand of the Mayor of said city and the corporate seal thereof, this fifteenth day of April, 1904.

Carter H. Harrison, Mayor.

Attest: ——— ———, City Clerk.

On the back of the license is printed the following:

License 450.

To Peddlers: Your attention is directed to the following section from the ordinance relating to peddlers.

Section 5. Any person who shall exercise the vocation of peddler by means of a wagon, cart, or other vehicle shall cause his name, together with the number of his license, to be painted on the outside of his vehicle, the letters and figures not less than one inch in length.

Any violation of this section shall subject the offender to a fine of not less than Five Dollars and not more than Fifty Dollars.

LIENS

A Lien is a hold upon or right to property to secure the payment of a debt or the discharge of an obligation; more specifically, it is a right in one person to retain that which is in his possession belonging to another, till certain demands of the person in possession are satisfied.

A Lien by Force of Common Law consists in a mere right to retain possession of the property until the debt or charge is paid.

A Particular Lien holds the property of another because of labor bestowed upon it or money expended for it.

A General Lien includes a particular lien and consists in a right to retain the property of another because of a general balance due from the owner.

Parties Having a Particular Lien without Special Statute.—Every Mechanic has a particular lien on any article on which he has expended labor and money.

Carriers also have a lien on all goods consigned them for special services rendered.

Lawyers, in some States, have a lien on all the papers in a case for their pay.

In Pennsylvania a lawyer or conveyancer has no lien upon his client's title papers for his fees and costs, nor presumably would he have a lien upon any other papers he might have belonging to a client.

Pawnbrokers have a right of lien in case where the person pawning the goods has authority to pledge, but not otherwise.

All Venders have a lien on goods for their pay as long as they are not delivered, but not after that.

Commission Merchants and Brokers have a general lien on goods for commission due.

Hotel Keepers have a lien upon the baggage of their guests for accommodation charges.

Liens by Express Agreement.—This occurs when goods are placed into the hands of a person for some special purpose with an express contract that the goods shall be a pledge for the labor or expense incurred or where property is delivered to another with the express understanding that it is security for a loan made on the credit of it.

Other Important Liens are: the lien upon the land of a debtor created in favor of his creditor by the judgment or other process of a court; the equitable lien of a seller of real estate for the unpaid balance of the purchase price, which is recognized only in some of the States; and the statutory lien of mechanics on the houses and ships which they build or repair.

Special Statutes.—In many States liens are given by spe-

cial statutes to boarding-house keepers, livery men and others.

Requisite of a Lien.—The essential requisite of a personal property lien consists in the lawful delivery of the property to the party claiming the lien or to his authorized agent. Whenever possession is voluntarily given up the lien is lost.

Rights of Creditor.—A creditor can by lien retain possession of goods even against the assignee of debtor, provided they have been placed honestly into his hands.

Enforcement of Liens.—A person holding a lien under the common law has in general not the power to sell the property; it is only a right to force payment by holding the property and thereby depriving the owner from the use of it until he renders justice where it is due. Where property is held as security for a loan the lender may sell, but he must give due notice of the time and manner of sale so as to give the owner of the property all possible chance to redeem or to waive rights. Many States have special statutes for the enforcement of liens and it is safest to consult these where enforcement becomes necessary.

MECHANICS' LIENS

Liens created by statutes, although based upon the principles of common law are designed to go further, namely: to give liens even where the possession is not with the consent of the owner or where exclusive possession is impossible.

Mechanics' liens are exclusively created by statutes; and no matter how just the claim may seem the lien will not exist unless the party brings himself under the provisions of the statute.

The statute is based upon the principle that the party who has increased the value of the property by his labor or material furnished should have security upon the property although changed in form.

Mechanics are here assured of their right to a lien upon the property for their labor and material furnished, but as to details concerning the conditions of the lien and the manner of enforcing it they will do well to consult the statutes of their particular State.

Before bringing action to enforce such a lien notice must

be given in writing by the holder of the lien as prescribed by law in each State.

Notice of Mechanic's Lien

CLERK OF THE COOK COUNTY COURT,
Chicago, Ill.

SIR: Please take notice, that I, Frank Greene, residing at 4550 Wentworth Ave., in the City of Chicago, County of Cook, have a claim against Charles Hudson, owner (*or only contractor, as the case may be*) of a new four-story brick dwelling house, amounting to Fifteen Hundred and Forty Dollars and Fifty Cents, now due to me, and that the claim is made for and on account of material furnished and labor done, and that such work was done and materials furnished in pursuance of a contract entered into the 15th day of April, 1906, (*here describe the contract,*) between the undersigned and the said Chas. Hudson. The said building is situated on Lot ——, in Block ——, in Stone's addition to the City of Chicago, on the east side of Halsted Street, and is known as No. 3242 of said street. The following is a diagram of said premises.

(*Insert diagram.*)

And that I have and claim a lien upon said building and the appurtenances and lot on which said building stands, subject to the provisions of an Act of the Legislature of the State of Illinois entitled "An Act to Secure the Payment of Mechanics, Laborers, and Persons Furnishing Material Toward the Erection, Altering, or Repairing of Buildings in the City of Chicago," passed ———, 19——, and of the acts amending the same.

Dated this 15th day of October, 1906.

FRANK GREENE.

Frank Greene, being duly sworn, says that he is the claimant mentioned in the foregoing notice of lien; that he has read the said notice and knows the contents; and that the same is true to his own knowledge, except as to those matters stated on information and belief, as to those matters he believes to be true.

FRANK GREENE.

Sworn before me this 15th day of October, A. D. 1906.

GEORGE FERGUSON,
Police Justice.

PROPERTY, REAL AND PERSONAL

All property is divided into real estate and personal property.

1. **Real Estate** means land and everything growing or built upon it, such as trees, houses and all kinds of buildings.

2. **Personal Property** is everything else. Thus all capital

stock of railroad companies and other companies is personal property, even though the property of corporations consists only of land.

A note, draft or claim upon a debtor is personal property. Real estate may change to personal property. Thus, trees growing and coal in mine are real, but when trees are cut down and coal is mined, they become personal in most States. Real seems to imply the immovable character of property.

KINDS OF OWNERSHIP

1. Full Ownership.—The greater part of real estate in this country is owned in full, absolute ownership; in legal terms, it is owned in fee simple.

One may do what he pleases with the property he owns in full. He can sell it, give it away or destroy it. As long as he injures no one else by doing so, no one has a right to interfere.

2. Life Ownership.—Property may be given to a person to hold and to use as long as he lives. He may use it as he sees fit; occupy and use it himself or rent it. But he cannot (1) sell or mortgage it; (2) he cannot transfer it to another by will; (3) he must not decrease the value by cutting down trees except in some cases for fuel and repairs or by taking down buildings. He can, however, transfer or assign his life ownership to another.

How Obtained.—A life ownership may be given by the real owner to one for whom he wishes to provide as long as the party may live, as a profligate son or invalid child.

A widow is by the common law entitled to a life interest in one-third of all the lands her husband has owned since their marriage. That is called her dower. In many States a widower is entitled to a life interest in all lands which his wife has owned since their marriage, provided a child has been born to them. The birth of issue is not essential in Pennsylvania.

In Connecticut dower has been abolished by statute after a certain date.

A widow is by law entitled to a life interest in one-third of all the lands her husband has owned since their marriage. That is called her dower.

3. Joint Ownership.—Here each person has a present and equal right to possession. All can use it or sell it together, each can dispose of his share as he pleases. If in a division they cannot agree, one can bring suit and the court will divide it.

4. To Hold in Trust.—Sometimes property is placed in trust of a third party for the use of children under age. Such a person is called a trustee, and is entrusted with the duty of managing the property and applying the profits to the use of those to be benefited.

The rights of such trustee are usually defined by a will or by statute. The powers of the trustee over the property are governed by the deed or will creating the trust or by statute.

The trustee can do nothing with the estate to benefit himself. The beneficiary has no power over the property; in some cases he cannot even transfer his rights to receive the income to another.

For laws governing the sale and transfer of real estate or interest therein, see Deeds, Leases, Mortgages. For laws governing sales of personal property, see Sales, Negotiable Notes, Chattel Mortgages. In general each State has different provisions from the others on this subject.

SALES OF PERSONAL PROPERTY

What Constitutes a Sale.—A sale of goods is the transfer of ownership thereof for a consideration in money, paid or to be paid.

Earnest will always bind the bargain, but it must consist of the giving away of something valuable, and not a mere ceremony.

Delivery of the Goods.—On a contract sale of goods the general rule is, that the delivery is to be at the place where the vendor has the article.

Delivery to an Agent, or carrier, if with the purchaser's consent, is sufficient.

Payment.—The law presumes that when a sale is made there is to be immediate payment unless otherwise agreed.

Credit may be expressly agreed upon, or may be implied from custom and usage.

How Goods are to be Shipped.—If the goods are to be sent to a distant point, they must be shipped by the route directed by the purchaser. If no direction is given, they are to be sent by the usual route. If so sent, the goods are the buyer's at the moment of shipment, and the seller is relieved of responsibility. But if the goods are to be delivered by the seller at a distant point, he is responsible that they reach there in good condition.

Goods Must Agree with Terms of Sale.—Unless the goods which are delivered agree with the terms of sale, the buyer need not accept them. He should, however, notify the seller promptly of his refusal to accept. If he retains the goods for a considerable time after discovering that they do not agree with the terms of sale, he may be held to have accepted them. If he returns the goods, he must return them all, unless there is a sale of different articles and the contract is severable.

Sale of Debts.—A claim upon a debtor may be sold just the same as other property, but notice of such a sale must be given to the debtor.

Defects.—Should there be any defects in the property or animals, which can be seen, that does not relieve the buyer from meeting his obligations, though he claims not to have seen the defects, provided there was no misrepresentation by the seller.

But if the defects cannot be seen and the seller recommends the property as good or sound, the buyer is relieved from filling his part of the contract or in some states may claim damages.

Warranty.—If the seller of goods makes any assertion respecting the kind, quality, or condition of the article upon which he intends the purchaser should rely as a fact, and upon which he does rely, that is a warranty.

Where Goods are Sold by Sample there is an implied warranty that the goods correspond with the sample.

It is a general rule that the employer will be bound by the

warranty of his clerk or shopman, if acting within the scope of his authority.

Warranty must be at the time of sale; if it be made after, it is void for want of consideration.

Stopping Goods on the Way to Purchaser.—The seller of goods, under certain conditions, has a right to stop goods that are in a carrier's hands and on the way to the buyer at some distant point. This is termed stoppage in transit.

Grounds of Stoppage.—If the buyer is insolvent or has been guilty of false pretences in buying, the seller has a right to stop them in transit.

If the goods were sent to pay a debt of the seller's they cannot be stopped in transit.

When the Right of Stoppage Ceases.—The right to stop goods in transit ceases when the buyer receives the goods at their appointed destination; or when the buyer takes the goods while on their way to him; or when the buyer has transferred the goods by bill of lading to a third party, in good faith and for value; or when the goods have passed into possession of the buyer's agent; or when the goods have been sold by the buyer, and the purchaser has taken possession of them; or when the seller has delivered the key of his warehouse to the buyer that he may get the goods; or when the buyer has agreed with the seller that the goods shall remain in the seller's warehouse, with or without storage; or when the buyer has handed the seller's order to the keeper of the goods for the delivery of the same.

BILLS OF SALE.

A Bill of Sale is a written instrument by which one person, for a moneyed consideration, transfers the right and interest which he has in goods or chattels to another.

The Validity of the Sale does not depend on the actual possession of the goods, but, as a general rule, in order to establish ownership in law against third persons, the purchaser must take actual possession of the property purchased. In some States, however, if the sale was not made fraudulently, for the purpose of evading the payment of just debts, the bill of sale is prima facie evidence of the sale, and will hold good against the creditors of the seller.

In Connecticut and some other States the vendor must not only take, but retain possession of the property purchased. **In Cases of Dispute** juries have the power to pass de-

cision upon the fairness or unfairness of the sale, and if fraud can be shown by the evidence, the bill of sale will be ignored and the sale declared void.

Form of Bill of Sale

Know all Men by These Presents, That I, John R. Hartman, of Bedford, Indiana, in consideration of Seven Hundred and Seventy Dollars ($770), the receipt of which is hereby acknowledged, do hereby grant, sell, transfer and deliver unto Charles Caxton the following property, to-wit:

Five Horses	@	$100	$500
Two Buggies	@	90	180
Two Harness	@	25	50
Two Plows	@	20	40
Total			$770

To have and to hold the said goods and chattels unto the said Charles Caxton, his executors, administrators and assigns, to his own proper use and benefit forever. And I, the said John R. Hartman, do avow myself to be the true and lawful owner of said goods and chattels; that I have full power, good right and lawful authority to dispose of said goods and chattels in manner aforesaid; and that I will warrant and defend the same against the lawful claims and demands of all persons whomsoever.

In witness whereof, I, the said John R. Hartman, have hereunto set my hand this twenty-first day of May, 1906.

JOHN R. HARTMAN.

(Witness) ————————

Bill of Sale—of a Horse, with Warranty

Know all Men by These Presents, That in consideration of One Hundred and Fifty Dollars, to me paid by Henry King, the receipt of which is hereby acknowledged, I, William Morris, by these presents do bargain, sell, and convey to the said Henry King, his heirs, executors, administrators, and assigns, one bay horse, of the male sex, bay color, fifteen hands high, with a white star in the forehead, known as Bay Boy, to have and to hold the same unto the said Henry King, his heirs, executors, administrators, and assigns forever.

And I, for myself, my heirs, executors, and administrators, will warrant and defend said horse unto him, the said Henry King, his heirs, executors, administrators, and assigns, against the lawful claims and demands of all and every person or persons whatsoever.

Witness my hand this tenth day of May, 1906.

WILLIAM MORRIS.

Witnesses:

JAMES FUNSTON,
RICHARD BOYCE.

LANDLORD AND TENANT

LEASES

Leases are contracts by which one party, called the lessor or landlord, gives to a second party, called the lessee or tenant, possession of land or other real estate for a fixed period of time, receiving in return for the use, possession and profit thereof a fixed compensation called the rent.

Duration.—A lease may be for life, by sufferance at will or for a term of years.

A Lease for Life terminates with the death of the lessee or tenant or any person specified as such in the lease.

A Lease by Sufferance of the landlord exists when a lease for a term of years has expired and the tenant is allowed to remain in possession. Such possession in some States may be terminated without notice.

A Lease at Will is one which exists only during the will of the landlord and may terminate at the will of either party, as the rights of possession on the part of the landlord or the rights of abandonment on the part of the tenant may justify, or by the death of either party, or by sale of prop-

erty, or by due notice. Statutes usually regulate this notice in each State.

A Lease for a Term of Years begins and ends at a certain specified date. Under the latter the tenant possesses greater privileges than under either of the two former.

Written or Unwritten.—Leases for a term of more than one year, in most of the States, must be in writing, and in some States must be executed, acknowledged and recorded in the same manner as deeds, otherwise they are invalid as against third parties without notice. In some States, such as Massachusetts, any lease not in writing is a lease at will.

In Pennsylvania a lease for three years or more must be in writing under the statute of Fraud. Where no time is mentioned it is deemed a lease for a year. Short notice is provided by statute in some cases.

Essential Specifications in a written lease are: dates, names, rent, description.

The Date fixes the beginning of the lease. Where no date is mentioned the time commences ordinarily with the delivry of the lease. This, however, is not always conclusive if another date can be proven.

Names.—The law recognizes only one Christian name and the surname. If a party assumes a false name he is nevertheless responsible. The landlord deals with the man, not with the name.

The Rent.—Rents may be payable in other valuables besides money; the amount should, however, always be stated. If not stated, the law will allow the landlord what the use of the premises is reasonably worth.

Description of Premises.—The lease must describe the premises. It need not be in full detail; any general description that will identify the property is sufficient. The parts and appurtenances that ordinarily belong to such premises are included.

Who Cannot Give a Lease.—A husband cannot make a lease which will bind his wife's property after his death. A guardian cannot give a lease extending beyond a minor's majority which the minor cannot annul if he wishes, but if he does not annul it the tenant is bound by it. Under the common law a married woman cannot lease her property,

but under the statutes of most States she can. A special statute supersedes the common law.

A minor cannot make a valid lease, but can become a tenant. Students under age hiring rooms come under this class.

Rights of Landlord

Subletting and Assigning Lease.—The landlord can prohibit his tenant from subletting the premises, or any part of them, or from assigning the lease, by stating the prohibition in a special clause of the same.

Tenant Breaking the Condition.—If the tenant has broken the condition of the lease by subletting the premises, the landlord, if he accepts the rent due, knowing of the subletting, cannot remove the tenant.

Right to Inspect Premises.—The landlord has the right to enter upon the premises to ascertain whether there is any waste or injury done, after first giving notice of his intention.

Making Repairs.—Unless expressly covenanted, the landlord is not obliged to make the necessary repairs. If a tenant wishes his landlord to make special repairs during the term he must stipulate for the same in the lease. But if the landlord does agree to make all necessary repairs and fails to do so, even that does not relieve the tenant from paying rent.

Notice to Quit.—In case of a tenant at will, or one who holds over after the expiration of his lease with the consent of the landlord, a notice to quit is necessary to compel him to give up his possession. This notice must, as a general rule, be given at a date before some "rent day," and distant from it by the usual period at which rent is payable. Thus, if it is payable monthly, there should be a month's notice ending on the day when the rent is payable. The time for giving notice, however, is usually fixed by statute in the different states in order that summary proceedings for possession may be commenced. If the rent is in arrears, only a brief notice is required. In most of the States this is fixed at from five to fourteen days. Such notice need not be made to end upon the day when rent is payable.

Refusal to Vacate.—If a tenant refuses to vacate the prem-

ises after the termination of his lease, from any cause, the proper and safest way for the landlord, as well as the cheapest, is to get him out by process of law, or by a sealed lease to a third party, who can legally claim possession.

Rights of Tenant

Some of the rights of tenants are embodied in the above statements of the rights of the landlord.

To What a Tenant is Entitled.—In taking possession of the premises the tenant is entitled to all the privileges and appurtenances to the property in all their details without being expressed in the lease.

Sale of Property.—The landlord affect the tenant's rights by selling the property, if he has a written lease. Such sale must be made subject to the rights of the tenant.

The Right to Sublet.—A tenant can sublet the rented premises or any part of them, unless expressly prohibited from doing so by the terms of the lease. He, however, remains responsible to his landlord, unless the latter accepts such third party as his tenant in place of the former and releases him in writing.

Lease Assignable.—A tenant's lease is always assignable unless it contains restrictions to the contrary. Such an assignment, however, to be fully legal must be under seal. The assignment may be for a part or the whole of the original term, but if for less than the original term, then it is properly subletting.

The Subtenant.—The subtenant bears no relation to the original landlord and is not responsible to him for rent. The tenant from whom he has rented is his only landlord. In the case of an assignment of the lease the new tenant becomes the tenant of the original landlord and must pay him the rent.

Repairs.—A tenant cannot make repairs upon the property rented and deduct the amount paid out from the rent, for that would be in effect compelling the landlord to do it.

Making Improvements.—For improvements that become part of the premises, or such as cannot be removed without injury to the same, the tenant can claim no allowance from the landlord; but a tenant may remove from rented prop-

erty articles which he has placed for use in some trade, such as engines or other machines, or even in some cases of buildings erected for the same purpose, or articles for domestic use, such as furnaces, shelves, gas fixtures, etc. Of course his personal property a tenant can remove any time at pleasure.

Right to Quit.—Where the renting is for a definite time no notice from either party to the other is necessary, as the landlord has the immediate right of possession as soon as the time expires; so the tenant has also the right to vacate at that time without giving notice to the landlord. Where, however, no limit of time is set a notice from either party is required.

Payment of Taxes.—Where the tenant is to pay the taxes on the property he occupies it must be distinctly stated in the lease, as a verbal promise is of no effect.

Effects of Mortgage.—If after renting the landlord should mortgage the property, the mortgagee's rights would be subject to those of the tenant holding a lease in writing (duly recorded if necessary under statute), and a sale or foreclosure could not disturb the tenant's possession.

Duties of the Landlord

1. It is the landlord's duty to see to it that his tenant has the quiet enjoyment of the premises and is not disturbed by any one having a better title to the same than the landlord.

2. The landlord must not render the tenant's occupation uncomfortable by erecting anything like a nuisance on or near the premises.

3. If not otherwise provided for in the lease, it is the landlord's duty to pay the taxes, ground rent, or interest on a mortgage that may exist.

4. The landlord is not bound to make repairs or allow the tenant for repairs which he may make unless especially agreed for in advance and so stated in the lease.

Duties of the Tenant

1. The tenant must take such care of the premises that others may not be injured by any neglect of any part of it.

2. The chief duty of tenant is to pay rent. If no time for possession is fixed, then he is only obliged to pay for time

he has occupied; but if under any agreement for a certain term he will have to pay for that term.

3. He is expected to keep the premises wind and water tight and repair all damages made or suffered by him. Natural wear and tear he need not make good.

4. The tenant is obliged to return the premises to his landlord at the end of his term undiminished in value by any willful or negligent act of his This requires him to replace broken doors or windows, or such other articles as may have been broken by use, neglect or accident.

Lease for Renting a House—Short Form

This instrument, made the first day of April, 1904, witnesseth, that I have this day let and rented unto Charles Waters my house and premises, No. 430 Lincoln Ave., in the City of Aurora and State of Illinois, with the sole and uninterrupted use and occupation thereof for one year, to commence the first day of May next, at the monthly rental of twenty-five dollars, payable in advance.

Witness my hand and seal.

JACOB BINDER. [SEAL]

Lease for Renting a House—Long Form

This Indenture, made the 20th day of May, 1904, between William B. Clark, of Chicago, State of Illinois, of the first part, and James L. Holmes, of the same place, of the second part,

Witnesseth, That the party of the first part has hereby let and rented to the party of the second part, and the party of the second part has hereby hired and taken from the party of the first part, the ground floor, cellar, and second story of the premises known as 4244 Indiana Ave., in the City of Chicago, with the appurtenances, for the term of three years, to commence the first day of June, 1904, at the yearly rental of nine hundred dollars ($900), payable in equal quarterly payments on the usual quarter days in each year.

And it is agreed that if any rent shall be due and unpaid, or if default shall be made in any of the covenants herein named, then it shall be lawful for the said party of the first part to re-enter the said premises and to remove all persons therefrom.

And the said party of the second part covenants to pay to the said party of the first part the said rent as herein specified and that at the expiration of the said term the said party of the second part will quit and surrender the premises in as good state and condition as reasonable use and wear thereof will permit, damages by the elements excepted; and the said party of the first part covenants that the said party of the second part on paying the said yearly rent and performing the covenants aforesaid shall and may peaceably and quietly have, hold, and enjoy the said demised premises for the term aforesaid.

In witness whereof the parties hereto have hereunto interchangeably set their hands.

WILLIAM B. CLARK,
JAMES L. HOLMES.

Landlord's Agreement

This certifies that I have let and rented, this first day of September, 1904, unto Chas. Burrows my house and lot, No. 450 Taylor Street, in the City of St. Louis State of Missouri, and its appurtenances; he to have the free and uninterrupted occupation thereof for one year from this date at the yearly rental of five hundred dollars, to be paid monthly in advance, rent to cease if destroyed by fire or otherwise made untenantable.

HENRY BRANDON.

Tenant's Agreement

This certifies that I have hired and taken from Henry Brandon his house and lot, No. 450 Taylor St., in the City of St. Louis, State of Missouri, with appurtenances thereto belonging for one year, to commence this day, at a yearly rental of five hundred dollars, to be paid monthly in advance unless said house becomes untenantable from fire or other causes, in which case rent ceases, and I further agree to give and yield said premises one year from this first day of September, 1904, in as good condition as now, ordinary wear and damage by the elements excepted.

Given under my hand this day, etc.

CHAS. BURROWS.

Landlord's Notice to Quit

TO CHAS. BURROWS.

SIR: Please observe that the term of one year for which the house and land situated at No. 450 Taylor St., and now occupied by yourself, were rented to you expired on the first day of September, 1905, and as I desire to repossess said premises you are hereby requested and required to vacate the same.

Respectfully yours,

HENRY BRANDON.

St. Louis, Mo., Sept. 10, 1905.

Tenant's Notice of Leaving

TO HENRY BRANDON.

SIR: The premises I now occupy as your tenant at No. 450 Taylor St. I shall vacate on the first day of July, 1905. You will please take notice accordingly.

Yours truly,

CHAS. BURROWS.

St. Louis, Mo., June 10, 1905.

EMPLOYER AND EMPLOYEE

RELATIVE RIGHTS AND OBLIGATIONS OF

An Agreement to work for another is a very common kind of contract in business life. (See Contracts.)

There are two general kinds:

1. To do some particular thing.
2. To do whatever the employer may direct.

Brokers, commission merchants, lawyers, tradesmen and many others belong to the first class; clerks and all others employed to do general work belong to the second class.

The act of employing in both classes is a contract in which each party agrees to do a certain thing.

The compensation.—All agreements to employ contain a promise to pay for the services rendered, which promise is either expressed or implied.

When services are requested there is always an implied promise to pay what they are worth, that is to say, the price usually paid by others for such services.

Employee's Agreement.—The person employed to do a certain work must fulfill his agreement, but he need not do anything else. It is an implied part of every agreement to render services that the work will be done with ordinary skill, care and diligence. A failure in this makes the employee forfeit his compensation, no matter how much he has done. If another does the work, the party to the agreement is in all respects responsible for the work done.

Loss or injury.—When one has another's property in his possession he is expected to take reasonable possible care of it; if through his carelessness it is lost or injured the careless one is not only not entitled to any compensation for what work he has done, but must compensate the owner for his loss or injury. For losses occasioned otherwise he is not responsible. (See Bailments.)

Length of Employment.—Where in the second class a person is employed to perform a certain class of duties, the time for which he is hired is an important element, whether that time be a day, a week, a month, a year or longer. When no time of service is specified, the time when payment is

made will indicate the length of employment. Thus, if a clerk, messenger, etc., is hired for no fixed time, but at so many dollars a week, or a month, it is a hiring for a week or a month, respectively. If the work continues the next week or month in the same manner, it is a new contract on the same terms.

Discharge of Employee.—An employee may be discharged at the end of his time without any cause or previous notice. If hired at so much per week and for no definite time he may be discharged at the end of any week, or even during the week, and he has no right to insist upon working after he is discharged. If, however, the discharge is without good cause, i. e., if the work is all right, he is entitled to payment for the whole period. If, on the other hand, there was good reason for the discharge, arising from his own fault, he is entitled to no pay for any of that period.

Leaving Services.—An employee can leave at the end of the time without giving notice. But if he leaves before the expiration of the time he is entitled to no pay for that period, no matter how much of the time he has worked, except in New Hampshire and a few other States where the law on this point is different from the generally accepted rule.

Thus, if he agrees to stay a month and left at the end of three weeks he would be entitled to nothing. The general rule applies here as elsewhere. Each party must keep his part of the contract if the other does, but need not if the other does not. (See Contracts.)

GUARANTY

A Guaranty is a promise or undertaking to pay the debt of another in case the latter does not pay it.

Names of Parties.—The person who makes the promise is called the guarantor, the person in whose behalf the promise is made, the principal, and the person to whom the promise is made, the guarantee.

Who are Guarantors.—Every surety is a guarantor, and every indorser of a negotiable instrument is in fact a guarantor, but with peculiar rights and duties not known to common guarantors. (See Negotiable Notes.)

Consideration.—Like every other binding promise a guaranty must be founded upon a good consideration, but it is sufficient, however, if the person for whom the guarantor becomes surety receives a benefit, or the person to whom the guaranty is given suffer inconvenience, as an inducement to the surety to become guarantor for the principal.

Must be in Writing.—Being a promise to pay a debt of another, a guaranty is required to be in writing (see Contracts). But where one who promises to pay the debt of another receives therefor an independent consideration, the promise is deemed a promise to pay his own debt, and need not be in writing. Thus, if two parties go together into a shop or warehouse, and upon one selecting and giving an order for goods, the other engages verbally to pay for those goods in case the other does not, in whatever form of words that promise is given, he is not bound by it—it must be reduced in writing and signed by the guarantor.

Any Material Change in the extent, terms, or character of the principal's liability discharges the guarantor, even though the change be in no way injurious to him. He may assent to it, however, and will then be liable.

Where there are several guarantors, and one of them is obliged to pay the debt, he can look to the others for their proportion.

Indemnity.—A guarantor ought to take care to be indemnified against loss, in the event of being called on to pay the debt. With this view indemnities are given (frequently, but not always or necessarily, by bond), holding harmless him who, under an undertaking to be responsible for the debt or engagements of another, becomes chargeable or liable for the debt.

Guaranty Companies.—There are companies which transact a guaranty or surety business, from whom, for a consideration, persons on assuming a place of financial responsibility where an indemnity bond is required, can obtain the necessary bond.

Guaranty for the Performance of a Contract

For a good and valuable consideration, by us received, we, the undersigned, do hereby guarantee a faithful compliance with the terms of the

above (or within) agreement upon the part of the said contractor, Richard Unger.

Done at Elkhart, Elkhart County, State of Indiana, this 15th day of November, A. D. 1906.

WALTER HANKINS, [SEAL]
FRANK KLINE. [SEAL]

Signed, sealed, and delivered
in the presence of
WILLIAM LOWER,
CHARLES ANDREWS

Guaranty for the Purchase of a Horse

Omaha, Nebraska, January 2, 1906.

In consideration of One Hundred and Twenty-five Dollars for a black mare, I hereby guarantee her to be only five years old, sound, free from vice, and easy to ride or drive. CHAS. HOWLAND.

[N. B.—*In this guaranty the seller will be held for all the defects in the animal at the time of sale. This is the safest way for one who is not an experienced judge of horses to purchase one.*]

Guaranty for a Debt Not Yet Incurred

Rochester, N. Y., March 10, 1906.

MESSRS. SANFORD & BARTH,
Buffalo.

GENTLEMEN: The bearer of this, Mr. R. J. Walker, of this city, is on the point of visiting your city for the purpose of buying goods, and desired articles in your line. He is considered worth some thirty thousand dollars, and such is our confidence in his ability and integrity, that we hereby guarantee the payment of any bills which he may make with you during this year, to an amount not exceeding five thousand dollars.

Yours respectfully,
WILLIAMS & RYAN.

Guaranty of a Debt Already Incurred

Reading, Pa., July 9, 1906.

THE PITTSBURG MANUFACTURING CO.,
Pittsburg.

GENTLEMEN: In consideration of One Dollar, paid by yourselves, the receipt of which is hereby acknowledged, I guarantee that the debt of three hundred dollars, now owing to you by Henry Wilcox, shall be paid at maturity.

Yours truly,
CHAS. SUNDERLAND.

PARTNERSHIP

A partnership exists when two or more persons combine their property, their labor, their skill, or all of these in business, to share the gains and losses in certain proportions.

The Firm is the name, style or title under which the partners do business, and also means the partners themselves, taken collectively. The firm name should be set forth in the articles.

DIFFERENT KINDS OF PARTNERSHIP

A General Partnership is constituted between individuals if they agree to enter into a general or particular business, to share the profits and losses together without fixing any limitations or conditions.

A Special or Limited Partnership is an agreement entered into to allow a special partner, whose name does not appear in that of the firm, to put in a limited amount of capital and to receive a corresponding share of the profits, and be held correspondingly responsible for the contracts of the firm, but only to the extent of the capital contributed by him, and no special partner can interfere in or transact firm business. A special or limited partnership agreement or certificate must generally be acknowledged or sworn to and recorded.

Such partnerships were unknown to the common law, and the limitation of liability is secured in this country only by strict compliance with the particular requirements of the statutes of the several States on the subject.

The statutes generally require such a partnership to be defined in a certificate, acknowledged like a deed, which must set forth the firm name, nature of business, names of general and special partners, distinguished as such, and the amount which each special partner contributes.

An Ostensible Partner is one who is known as such to the world.

A Secret Partner is one who is not openly or generally so declared. He is not liable for debts contracted after his retirement, although he has given no notice of the same.

A Dormant or Silent Partner is one who takes no part in the transaction or control of the business, but shares in the profits and losses according to certain agreements.

A Nominal Partner is held out to the world as such without actually participating in the profits and losses of the business.

HOW PARTNERSHIPS ARE FORMED

All persons who are legally competent to do business for themselves may enter into partnership.

A partnership may be formed by a mere verbal agreement and stand in law, but a written agreement is the only safe one, and he who neglects it will doubtless have reason to regret it later.

The parties may agree as they please as to sharing profits or losses, but in the absence of writing to prove the contrary the law will assume that partners share profits and losses equally.

The articles of agreement should be drawn up with special care in writing the details of conditions, liabilities and proportionate share of profits or loss fully stated.

How Soon a Partnership is in Force.—It is presumed that a partnership commenced at the time the articles of copartnership are drawn unless otherwise stated.

Use of Name in Partnership.—When a partner withdraws from a firm, but allows his name to be used as before, or if one lends his name to a firm, in either case he is held responsible to third persons as a partner provided such third person has given the credit on the faith thereof.

Suing Partners.—It is generally supposed that one partner cannot sue another. This is not wholly true. A partner can sue for a balance due him after settlement of general accounts or for a balance due him on some specific accounts or for a balance due him on some specific account. It is, however, best to appeal to a court of equity, for that court can do for partnership what the law cannot do.

DISSOLUTION OF PARTNERSHIP

A partnership may be dissolved by mutual consent, by expiration of predetermined time, by death of one of the part-

ners, by insanity, by the bankruptcy of either partner, or by the court for any good cause, such as dishonestly of one partner against the rest, or incapacity caused by habitual drunkenness or conviction of any crime.

A partner may withdraw at any time if no time for the continuation of the partnership is mentioned in the articles of agreement, but he must give due notice of his intention to the other partners.

If the time for the continuance of the parenership is mentioned, a partner can nevertheless withdraw at any time, but he is responsible to the firm for damages caused by the breach of his promise.

If a partner dies the surviving partners alone have the right to settle up the business. To his heirs and legal representatives they need only to render an account of the business.

Notice to be Given.—Upon the dissolution of a partnership by mutual consent it should be indorsed on the articles of copartnership and a notice given in some prominent newspaper. Special notice should also be sent to each one of the creditors of the firm and to those firms or persons with whom the partnership has had dealings.

Authority of Partners.—As a general rule the whole firm and each member of it is bound by the acts and contracts of one partner, because in the eye of the law the act or contract of one is regarded as the act of all. Each is regarded as the agent of all without any express authority being given. Thus, loans, purchases, sales, assignments, pledges, or chattel mortgages effected by one partner on the partnership account, and with good faith in the third party, are binding on all the firm, but not assignments for the benefit of creditors.

So is also release by one a release; notice to one is notice to all; demand of one is demand of all. In matters, however, not connected with the partnership, but intended for his own personal interests, the firm is not bound.

Liability of the Several Partners.—For the payment of partnership debts the property of the firm, both real and personal, as also that of each individual partner, is he'd responsible for amount of the unpaid partnership debt.

Individual Debts of Partners.—If a partner has individual debts, then his interest in the firm is held responsible for them, after the debts of the firm have been paid. The liabilities of the firm, however, always have the first claim upon its own property.

Liabilities of a New Partner.—A new partner is not responsible for debts of the firm contracted by the same previous to his admission.

Selling of a Partner's Interest.—No partner can sell his interest to an outside party, in order to have him take his place, without the consent of the other partner.

Authority of Partners after the Partnership is Dissolved.—After dissolution each partner has the right to settle up the business, unless the partners agree otherwise and give due notice thereof. He can, however, create no new obligations, but only settle up the old ones. The statute law of the State should be carefully complied with in this respect.

The following forms will serve as models for drawing up articles of copartnership:

Articles of Copartnership

Articles of Agreement made and concluded this first day of January, in the year A. D one thousand nine hundred and four, between Henry R. Raymer, of the first part, and Charles B. Werner, of the second part, both of the City of Cincinnati, County of Hamilton, State of Ohio.

The said parties have agreed to associate themselves as copartners for the purpose of carrying on the General Dry Goods Business at No. 450 Cleveland Avenue, in the City of Cincinnati.

1. The name, title, and style of such partnership shall be Raymer & Werner and it shall continue three years from date hereof, except in case of the death of either of the said partners within the said term.

2. That the said Henry Raymer contributes Six Thousand Dollars ($6,000) and the said Chas. Werner Two Thousand Dollars ($2,000).

3. All the net profits arising out of the business shall be divided in the following proportions: Three-fourths to the said Raymer and one-fourth to the said Werner.

4. That books of account shall be kept, in which shall be entered a full and exact account of all purchases, sales, transactions, and accounts of said firm, and which shall always be open to the inspection of both parties and their legal representatives respectively.

5. That the said Henry Raymer shall have exclusive charge of all the buying for the firm.

6. Each partner shall devote all his time to the said business and will use his best efforts to make the business successful and promote the interests of the firm in every way.

7. Neither party shall assume any obligation or liability in the name of the firm for the accommodation of any other person or persons whatsoever without the consent of the other party; nor shall either party lend any of the funds of the firm without the consent of the other partner.

And it is further agreed that if either party violates any of the aforesaid articles of agreement the other shall have the right to dissolve this copartnership immediately upon becoming informed of such violation.

In Witness Whereof, we have hereunto set our hands and seals the day and year above written.

HENRY R. RAYMER, [SEAL]
CHARLES B. WERNER. [SEAL]

Executed and delivered in the presence of
H. R. BURROWS,
B. M. MILLER.

Articles of Limited Partnership

Articles of Partnership agreed upon this first day of May, A. D. 1904, between Henry R. Raymer of the first part, and Charles B. Werner, of the second part.

The parties hereto agree to form a limited partnership, under the law providing for limited partnerships, under the style of Henry R. Raymer, as retail dealers in dry goods, to be conducted in the City of Cincinnati, County of Hamilton, State of Ohio, to commence this day and continue three years.

Henry R. Raymer is to be the general partner, and contribute to the capital $4,000. He is to have charge and management of the business and devote his time and attention to it, and use his best exertions to make it profitable. He is to keep correct and proper books of account, in a proper manner, to show all the partnership transactions, which are to be open for examination to said Werner at all times, and shall communicate to said Werner, from time to time, all information that he may desire as regards the business.

Charles B. Werner is to be the special partner, and, at the time of executing these articles, has contributed to the capital eight thousand dollars ($8,000) in cash to the common stock.

From the profits, if any, each partner is to receive the interest upon his contribution to the capital, and the residue of the profit is to be divided between them. An accounting is to be had once in six months, the profits and losses ascertained, and the losses, if any, are to be borne by the partners in proportion to their respective contributions to the capital.

HENRY R. RAYMER, [SEAL]
CHARLES B. WERNER. [SEAL]

Executed and delivered in the presence of
H. R. BURROWS,
B. M. MILLER.

Certificate of Limited Partnership

This is to Certify, That the undersigned have, pursuant to the provisions of the statutes of the State of Ohio, formed a limited partnership under the firm name of Henry R. Raymer, that the general nature of the business to be transacted is that of retail dealers in dry goods; that it is to be conducted in the City of Cincinnati; that Henry R. Raymer is the general partner and Charles B. Werner the special partner; that the said Charles B. Werner has contributed the sum of eight thousand dollars as capital toward the common stock; and that said partnership is to begin on the first day of May, A. D. 1904, and is to terminate on the first day of May, A. D. 1907.

Dated this first day of May, 1904.

HENRY R. RAYMER,
CHARLES B. WERNER.

CITY OF CINCINNATI, }
Hamilton County. } *ss.*

On the first day of May, 1904, before me came Henry R. Raymer and Charles B. Werner, to me known to be the individuals described in and who executed the above certificate, and they severally acknowledged that they executed the same.

WILLIAM LORRIMER,
[SEAL] Notary Public.

Dissolution of Partnership

We the Undersigned do mutually agree that the within mentioned partnership be and the same is hereby dissolved, except for the purpose of the final liquidation and settlement of the business thereo and upon such settlement wholly to cease and terminate.

In witness whereof, we have hereunto set our hands and seals this first day of January, 1905.

HENRY R. RAYMER, [SEAL]
CHAS. B. WERNER. [SEAL]

Signed, sealed, and delivered }
in presence of }
FRED PORTER,
ALLEN MORTEN.

Notice of Dissolution

Notice is hereby given that the partnership heretofore existing between Henry R. Raymer and Chas. B. Werner, o Cincinnati, Ohio, under the firm name of Raymer & Werner, is this first day of January, 1905, dissolved by mutual consent.

HENRY R. RAYMER,
CHAS. B. WERNER.

The business will be continued at Cincinnati by Henry R. Raymer, who is authorized to settle the affairs of the said firm.

Cincinnati, January 1, 1905.

MAIL ORDER BUSINESS

Origin.—The mail order business is an evolution of the department store, or the concentration under one management of the sale of every imaginable article for which a customer can be found. It is simply the department store universalized by means of the postoffice establishment.

The Postal Service of the United States is the greatest business concern in the world. It is estimated that it handles eight thousand pieces of mail matter a minute, and in the course of a year from four to five billion pieces, including letters, papers, books and parcels.

It was a master stroke to convert this great institution into a business agent for a commercial house, and a fortune was realized from it almost immediately. Men and women are still making fortunes through the operation of this great postal department store system.

The mail order mercantile business originated in Chicago, where it is now carried on the most extensively. In 1903 the mail order houses of that city did a total business of $55,000,000.

How to Engage in the Business.—One who has made a success of it furnishes the following rules for the guidance of others who may wish to engage in the business:

First.—Go slowly. Don't decide to embark upon a mail order career and then resign your present position without knowing definitely in what direction you are going to work. A few months of quiet consideration and planning won't do any harm. There will be as many customers for you after that period as there are now.

Second.—Choose carefully a "leader" or article upon which you will base your main campaign and upon which you can get all the profit. To do this, unless you are already the possessor of an exclusive idea, run carefully over the entire list of what people wear, eat, drink, or need from the cradle to the grave. Nothing is too small or too large to be included in this vast catalogue, and your eventual choice will probably come in a flash of inspiration.

Third.—Having chosen your leader, investigate carefully the price at which you will be able to offer it to successfully compete with other similar articles. Be sure that you can sell it through the mails cheaply enough to meet competition.

Fourth.—Plan your advertising. Consultation with an expert is a safe precaution, as an advertising man possesses experience that will be valuable to you even if you are brilliant enough to successfully word your own advertisement.

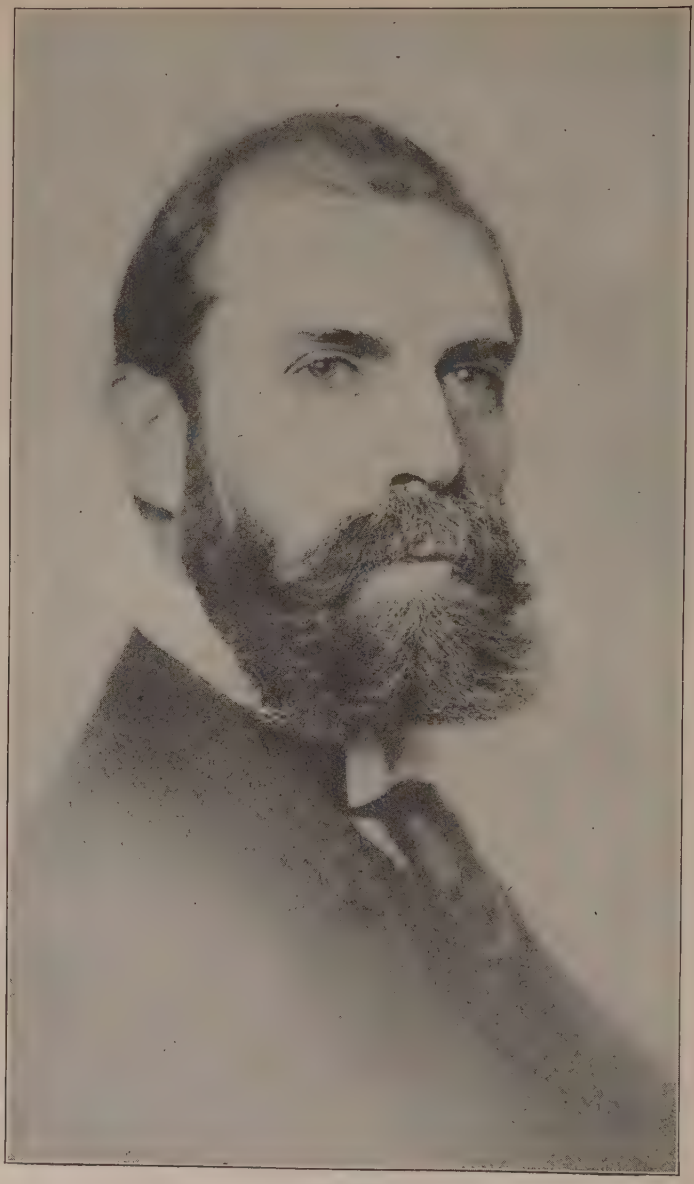
Fifth.—As a general rule one-fifth of a small capital is not too much to expend in experimenting. When you begin to get results resign your position, devote your whole time to your new business, and develop it economically and judiciously upon the lines originally decided upon.

Sixth.—Do not be content with a single leader. Get from supply houses a number of specialties, and inclose circulars for them in all your letters. Any orders thus gained cost merely the two-cent stamp that carries the bait.

These are simple rules to write, but it takes business capacity to carry them out. The days of the "fake" mail business are over. Every now and then a swindle is brought to light, but the government is stern and relentless in ferreting out and suppressing such enterprises. It was the government that gave the mail order business its first great impetus by reducing the rate of postage, and it is the government that has doubled the total trade in the last few years by establishing the rural free delivery system. (For rates of postage on merchandise, etc, see *Postal Information.*)

PART VIII

Insurance, Naturalization, Copyrights, Divorce, etc.



C. E. HUGHES
Attorney at Law
New York's Famous Insurance Inquisitor

INSURANCE

Definitions.—Terms Employed.—Insurance is a contract by which one of the parties, called the insurer, binds himself to the other, called the insured, to pay him a sum of money or otherwise indemnify him in case of the happening of a fortuitous event, provided for in a general or special manner in the contract, in consideration of a certain sum of money called a premium, which the latter pays or binds himself to pay him.

The Instrument of writing by which the contract is made is called a policy, the events or causes to be insured against risks or perils, and the thing insured the subject-matter or insurable interest.

Kinds of Insurance.—Insurance is divided generally into three kinds: fire, marine, and life—the last including accident insurance as a branch.

FIRE INSURANCE

Fire Insurance includes all undertakings to indemnify the insured against losses by fire, whether upon buildings, ships, or the goods and stock contained therein, or live stock.

What Property may be Insured.—Every kind of property may become the subject of insurance, unless, from motives of public policy, it has been prohibited by law. Insurances are most commonly made on buildings, goods, merchandise, freight, bottomry, loans, profits and commissions.

Who may Insure.—A person in order to secure a valid policy must have an interest in the property insured. It is not necessary, however, that a person should be the owner of the whole or a part of the property in order to enable him to effect an insurance thereon. It is sufficient if he is directly interested in its safety. A person, therefore, has an insurable interest in any property when he is so circumstanced with respect to it, that its loss will be prejudicial to him.

Increasing Risk.—The amount of premium is based upon the degree of danger there is of fire. The insured must, therefore, not increase the risk; if he does the policy be-

comes void. No change should be made without notifying the insurance company and obtaining its consent.

Changes made after the policy is issued, for which the insured is not responsible, will not affect the contract.

Conditions in the Policy.—All policies contain certain additional agreements, such as: that no gunpowder or gasoline shall be kept on the premises insured; that they shall not become vacant, or that if any other insurance is added the company be notified.

Misrepresentation on the part of the owner as to the character of the property or the danger to which it may be exposed make the policy void.

Negligence.—A fire caused by negligence does not exempt the company from paying the loss, unless the negligence is so great as to be criminal or to indicate fraud.

Proof of Loss.—In order to recover amount of insurance the insured, after the loss of property by fire, must prove the quantity and value of the goods so lost, and also the injury sustained on goods not burned by reason of water used in attempting to extinguish the fire, and must make such affidavits and produce such certificates as the terms of the policy require, and cause the same to be filed in the office of the company within the time specified in the policy of insurance.

But with some companies and in some States the full insurance will not be paid unless the insurance is of a certain fixed proportionate amount of the value of the property insured. For instance, if goods or property valued at $10,000 are insured for only $5,000 and there is a partial loss, say, of $6,000, the full $5,000 insurance will not be paid but only a proportionate amount thereof.

Amount Paid.—The amount to be paid in fire insurance is the amount of the loss, unless the loss exceeds the amount of the policy. The company never pays more than the policy. Thus if the policy is for $3,000 and the loss is $300, it pays $300 and the policy becomes $2,700. If the policy is $5,000 and the loss $6,000, the company pays only the $5,000 and the policy is discharged.

Valuation is sometimes made in policies upon chattels of uncertain value, as books, plate, or works of art, and if a

loss happens the insured is entitled only to actual indemnity.

Rebuilding.—Insurers against fire usually stipulate that they may rebuild or repair the premises insured, if they prefer, and they frequently avail themselves of the right.

Transfer of Policy.—A policy of insurance is not negotiable; yet if it is transferred for value in good faith, the transfer may be so far valid as to give the assignee a right to sue, subject to any equitable defenses which could be made against the insured.

The insurance policy does not go with the property when sold, but must be conveyed separately with the consent of the company. The assent of the Insurance Company in writing should be appended after any change in the ownership of the policy.

Fire Insurance Policy—The Main Clause

No. 420,745. $5,000.

The Hartford Fire Insurance Company, of Hartford,

In consideration of forty dollars, do insure Chas. A. Barrows against loss or damage by fire to the amount of five thousand dollars as follows:

On certain books, engravings, steel and copper plates, and other merchandise now contained in the building at No. 425 Lincoln Street, Boston.

And the said company hereby agree to make good unto the assured, his executors, administrators, and assigns, all such immediate loss or damage (not exceeding in amount the sum insured) as shall happen by fire to the property above specified, from the 15th day of January, 1906, at noon to the 15th day of January, 1907, at noon, the amount of such loss and damage to be proven and paid, or made good according to the following terms and conditions:

(*Here follow ordinarily a large number of additional clauses.*)

In witness whereof we have caused this policy to be attested by the president and secretary of the company the 10th day of January, 1906.

WM. R. STANFORD, Secretary. WALTER E. CLARKE, President.

[SEAL]

Renewal of Fire Insurance

Hartford, Conn., January 15, 1907.

The Hartford Insurance Company,

Do insure Chas. A. Barrows, in consideration of forty dollars, being the premium on five thousand dollars; this being a renewal of policy No. 420,745, which is hereby continued in force for one year, to wit, from January 15, 1907, to January 15, 1908, at noon.

WILLIAM R. STANFORD, Secretary. WALTER E. CLARKE, President.

[SEAL]

Assignment of Policy

Know all Men by These Presents, That I, the within named Chas. A. Barrows, for and in consideration of the sum of Fifty Dollars, to me paid by Charles Dana, of Boston (the receipt whereof is hereby acknowledged), have granted, sold, assigned, transferred, and set over, and by these presents I do absolutely grant, sell, assign, transfer, and set over to him, the said Charles Dana, all my right, property, interest, claim, and demand in and to the within policy of insurance, which have already arisen, or which may hereafter arise thereon, with full power to use my name so far as may be necessary to enable him fully to avail himself of the interest herein assigned, or hereby intended to be assigned. The conveyance herein made, and the powers hereby given, are for myself and my legal representatives to said Charles Dana and his legal representatives.

In testimony whereof, I have hereunto set my hand and seal, this tenth day of May, A. D. 1906.

CHARLES A. BARROWS. [SEAL]

Executed and delivered in the presence of
WILLIAM SPENCER.

We hereby approve of the above assignment.
(Signed) John Jones, Secretary,
New Hartford Ins. Co.

MARINE INSURANCE

Marine Insurance is a contract to pay the owner of a ship and cargo certain portions of his loss, if it is damaged or destroyed while at sea.

The Premium is often paid by a series of notes called premium notes. The policy is valid whether the notes are paid or not.

The Amount of the policy may be any fixed sum, namely, the loss the company shall be responsible for. The amount to be paid is that proportion of the loss which the amount of the policy bears to the value of the property. Hence the company does not pay the whole of the loss unless the policy equals the value of the property.

If property is insured to only half its value the company pays only one-half the loss.

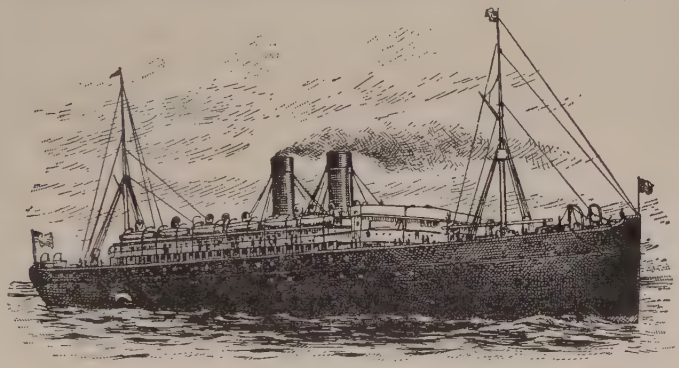
If policies have been obtained in several companies each company pays its proportion of the loss in the same proportion as though it were the only company.

A Time Policy is one framed to cover possible loss within a specified time. This may be a year or certain months of

a year. Other policies cover only the risk in a certain voyage.

When the insurance is for a certain voyage, the place of sailing and that which is to be the termination of the voyage must be specified, and the voyage must be by the ordinary course from one port to the other unless deviation is allowed by the terms of the policy. If the vessel does not enter upon the contemplated voyage the premium need not be paid, and if paid must be returned.

Risk Assumed.—The risk provided against is not only that of fire, but also the other extraordinary perils attending a sea voyage, such as the perils of the sea, piracy, general average and salvage. General average is the loss of goods occasioned by throwing overboard a part of the cargo in



order to save the vessel during a storm. Salvage is a compensation seamen obtain for saving property they find abandoned at sea.

Ownership.—Since goods are often sold after being insured, the consent of the company should be secured to make the insurance valid. This may be obviated by making the policy "for the benefit of whom it may concern at the time of the loss." Then the policy remains in force no matter who owns the goods.

Valued Policy.—The place for the valuation of the property is sometimes left blank. In that case the value must be determined at the time of the loss. But often the value is inserted; then that value is controlling for both parties. it is then called a valued policy. If in that policy the goods

are valued at $500 and the loss is $250, the company pays only $250. If the loss had been $500 the company would have paid the whole loss. A full insurance is when value of property and value of policy are equal.

Seaworthiness.—It is taken for granted that a vessel to be insured is seaworthy. The person insured, not the company, must take the risk. If the vessel proves to be not seaworthy the insurance is void, though both the insured and insurers were not aware of it.

Lost or Not Lost.—These words in a policy have reference to the insurance of property on sea when neither the owner nor the company know whether it is already lost or not. The company take the risk, also, and will pay the loss at the time the contract is made.

Abandonment.—If property is wholly lost the company pays the whole amount of its policy. If the partial loss be less than half the value of the property the company pays its due proportion of the loss. But if the loss is partial, but amounts to more than half the property in value, its owner has the right to give up to the company what remains, and claim the full amount of the policy. This is called the right of abandonment. If the words "without right of abandonment" are in the policy the company can refuse to take the property.

LIFE INSURANCE

Life Insurance is a contract to pay a certain sum of money on the death of a certain person or when he reaches a certain age.

A Whole-life Policy is an agreement to pay a certain sum to the representatives of the insured mentioned therein on his death.

An Endowment Policy is an agreement to pay a certain sum to the insured at the end of a fixed term, or to his representatives on his death, should that happen before the end of the term.

Principles Governing.—Life insurance is governed by the same legal principles, so far as they are applicable, as other kinds of insurance. Any fraud or deceit in obtaining a

policy, or misrepresentation of essential facts, will render it void.

Insurable Interest.—Any person can insure the life of another upon whom he or she is dependent for support, or in the continuance of whose life he or she has an adequate pecuniary interest, and a wife is always held to have an insurable interest in the life of her husband.

The consent of the person whose life is insured must be obtained to a policy issued in favor of a third party.

If there is no insurable interest the contract is void, as being a wager policy.

A creditor may insure the life of his debtor for the protection of his debt.

Restrictions are usually imposed by the company, such as to travel only within certain limits, or not to engage in hazardous employments. In such cases, if the insured desires to overstep the restrictions, permission must be obtained from the company.

Assigning Policy.—Life insurance policies are assignable. The policy itself usually specifies the way in which the transfer must be made. Generally the assent of the insurance company is required to an assignment.

Life Insurance Policy

No. 48,728. $1,000.

The Occident Life Insurance Company,

In consideration of the representations made to them in the application for this policy, and of the sum of thirty-four dollars and the further sums of thirty-four dollars to be paid on the 27th day of January and July of each year during the continuance of this policy, do insure the life of Chas. N. Milton, of Fort Leavenworth, in the County of Leavenworth, State of Kansas, in the amount of one thousand dollars for the term of his natural life. And the said company does promise and agree to pay the amount of the said insurance at its office in St. Louis to Chas. N. Milton's legal representatives in sixty days after due notice and satisfactory proof of his death during the continuance of this policy.

In witness whereof the said Occident Life Insurance Company has by its president and actuary signed and delivered this contract this 27th day of July, 1906.

WARREN WRIGHT, Actuary. JAMES E. COSTELLO, President.

[SEAL]

Premium $34, payable semi-annually.

Indorsed Assignment

I, the undersigned Chas. N. Milton, insured by the within policy issued by the Occident Life Insurance Company, in consideration of one dollar to me in hand paid by Clarence Dorr, and for other good and sufficient consideration, do hereby assign and transfer to the said Clarence Dorr, the said within policy, together with all the right, title, interest, and claim which I now have or hereafter may have, in, to, or under the same.

Witness my hand and seal this first day of October, A. D. 1906.

CHAS. N. MILTON. [SEAL]

Executed in the presence of
EDWARD EVERETT.

Recent investigations by a Legislative Committee into the management of the leading Life Insurance Companies of New York, have created a world-wide interest in the principles on which the life insurance system is based and the economic justification of the system.

Big Income and Surplus.—One fact looms out of the investigations so prominently that nobody can overlook it, and that is, that life insurance in the United States costs too much. During 1904 the "old line" life insurance companies collected premiums from policy holders to the total of $472,000,000, and received other income (interest and rentals) amounting to $108,000,000 more. Their total income was therefore $580,000,000, paralleling the income of the federal government. There were more than 69,000 insurance agents selling policies and collecting these premiums. Not only are the people of the United States now paying into life insurance treasuries $9,000,000 a week, but the "old line" companies hold $2,250,000,000 assets to protect outstanding policies or as surplus over legal-reserve liabilities. Adding industrial and fraternal insurance, fully $2,500,000,000,—equal, approximately, to the national debt at the close of the civil war,—is now held in trust in life insurance treasuries.

Diverting the Surplus.—Instead of regarding this vast surplus accumulation as a sacred trust for the widows and orphans of the policy holders, the managers of the great life insurance companies in New York devised methods of dividing it up, in part at least, among themselves, their families and friends.

Among the principal means resorted to for thus diverting

the surplus held in trust for the policy holders, was the creation of exorbitant salaries for the officers of the companies, questionable loans, boodle funds for political and legislative purposes, subsidiary trust companies owned by themselves, which paid them large dividends through their handling of the money of the insurance companies, and syndicates of those subsidiary companies for engaging in bond and stock speculations for which the policy-holders' money was the only capital.

Big Emoluments of the McCurdy Family.—President McCurdy, of the Mutual Life, was paid a salary of $150,000 a year, his son, holding a subordinate position, got about $130,000 a year, and his son-in-law received about $147,000. A partial estimate of the McCurdy family's wages and commissions since it has been working for the company is something more than $4,500,000.

Big Expenses.—Taken together, the expenses of the three big companies, the New York Life, the Mutual Life, and the Equitable Life, are double those of the entire State government of New York. The policy holders of these three leading life insurance companies of New York paid in during the year 1904 five dollars to get two dollars back and to give the managers and agents one dollar. For every $100 paid to the policy holders during the year, whether in death claims, matured endowments, surrender values, dividends or what not, the Equitable paid to its officers and agents and for managing expenses $43.05; the Mutual, $48.30; and the New York Life, $48.27. The expenses have increased from less than 10 per cent. of the old cost of life insurance to more than 25 per cent.

Small Dividends.—During 1904 the Mutual's savings on mortality excess interest and surrender reserves were $9,423,922, but the total dividends paid to policy holders were only $2,717,549 or less than one-third. The New York Life and the Equitable both paid the policy holders less by a third than the surplus savings even after all the extravagances of management.

Enough has been disclosed by the investigations to prove that the management of not only the "big three," but all the large companies has been wasteful, almost beyond belief.

In the case of the Prudential, for example, it was proved that it cost $130,500,000 to collect $306,500,000 from policy holders and to pay out $92,000,000 to beneficiaries.

Companies Solvent.—But in spite of this extravagance of the companies, no suspicion of insolvency has been justified by the investigations that have been made. The companies all appear to be sound, all abundantly able to discharge their liabilities. This, however, does not alter the fact that policy holder's investments ought to be worth a great deal more than their face value. If the business of the companies had been economically and honestly conducted for the benefit of policy holders, instead of for the benefit of insiders, outstanding policies would be worth two or three times what they are worth now. Or, what amounts to the same thing, the existing protection would have been obtained for one-half or one-third the amount of premium paid in.

Government Control.—In Germany the control of private life insurance companies is entrusted to the ministry of the interior. And as a result of this supervision by the German government, German life insurance companies are managed comparatively cheaply. For instance, the balance sheet for 1904 of one large Berlin company shows that with a premium revenue of $2,500,000, the administrative expenses amounted to but $280,000, including rent, taxes, salaries, commissions and the usual office, traveling, medical and other expenses.

Several bills have been introduced in Congress looking to the regulation of insurance by the national government, and it is to be hoped that some way will be devised, which the courts will hold to be constitutional, for compelling the insurance companies to reduce their rates at the same time that they reduce their expenses. Premiums should be cut at least one-third.

Big Salaries Paid to Insurance Officials.—The following list will give the reader an intelligent idea of the immense salaries paid to the principal officers of leading Life Insurance Companies prior to the recent investigations into their management by a New York Legislative Committee:

McCurdy, President of the Mutual Life	$150,000
Alexander, President of the Equitable Life	100,000
McCall, President of the New York Life	100,000

Hegeman, President of the Metropolitan Life	100,000
Dryden, President of the Prudential Life	100,000
Hyde, Vice-President of the Equitable Life	100,000
Fiske, Vice-President of the Metropolitan Life	75,000
Grannis, Vice-President of the Mutual Life	50,000
Gillette, Vice-President of the Mutual Life	40,000

Resignation of Officers and Reduction of Salaries in 1905.—The committee's investigations revealed conditions which resulted in the forced retirement of the principal officers in December, 1905, of some of the companies and the employment of their successors at greatly reduced salaries, as shown by the following list of new officers and salaries paid them at this time—1906:

Paul Morton, President of the Equitable Life	$80,000
Peabody, President of the Mutual Life	50,000
Orr, President of the New York Life	50,000
Grannis, Vice-President of the Mutual Life	40,000
Gillette, Vice-President of the Mutual Life	30,000

Total Salaries Paid by Big Life Insurance Companies in 1905.

Metropolitan	$2,796,018
Equitable	2,066,025
Prudential	1,975,690
Mutual, New York	1,867,861
New York Life	1,867,392
Northwestern Mutual	700,762

ACCIDENT AND CASUALTY INSURANCE

Accident and Casualty insurance provides indemnity, not only against loss or injury from personal accident, but also against loss from various fortuitous happenings.

Accident Insurance, as applied to the death or injury of persons, usually provides for a stipulated sum to be paid on the death by accident of the insured and a specific indemnity for the loss of one or both eyes, one or both hands, or one or both feet, while the addition of about one-fifth to the ordinary premium rate double indemnity is promised for death or disabling injury while riding upon railways and other public conveyances. Some companies stipulate to pay, besides the usual indemnity in case of accidental death, a weekly benefit for a partially disabling accident.

Casualty Insurance covers losses by fortuitous happenings in many kinds of business. There are companies which insure against elevator accidents, breakage of plate glass, loss through dishonest employes, liability of employers for accidents to those in their employ, accidents to steam boilers, etc.

NATURALIZATION

All foreigners not born within the jurisdiction of the United States are regarded as aliens until they are naturalized.

An alien has not the right to vote at elections of officers of the government, State, county, city or town; neither can he hold a public office nor serve on a jury before having declared his intention of becoming a citizen, nor in some States until he is qualified to vote therein.

Rights of Aliens.—An alien is entitled to all the privileges of a citizen, except political rights. He can buy and sell real estate and personal property, make contracts and sue and be sued; he is entitled to the full protection of the government in his person and his property.

HOW TO BECOME NATURALIZED

1. **Declaration of Intention.**—Two years before he can be admitted as a citizen an alien must declare his intention to become a citizen of the United States before a federal court, or some local court of record, or the clerk of either of such courts. This declaration entitles him to a vote in most of the States. He must take the following oath before court:

I, Jacob M. Becker, do swear that I will support the constitution of the United States and that I do absolutely and entirely renounce and abjure forever all allegiance to any foreign Prince, Potentate, State or Sovereignty whatsoever, and particularly do absolutely and entirely renounce and abjure all allegiance and fidelity to the Kingdom of Prussia, whereof I was a subject.

JACOB M. BECKER.

Sworn and subscribed in open court this 20th day of December, A. D. 1906.

2. **Naturalization Completed.**—Two years after filing his declaration of intention, having been a resident of the United States for five years, he again appears in court, giving written proof that he has been long enough in the

United States to become a citizen, and makes oath of his allegiance as a sitizen, accompanied by the oath of a witness, giving proof of his residence and moral character, and satisfying other requirements of statute.

3. If an alien has served in the army or navy of the United States and can show papers of an honorable discharge from service, he can be naturalized after having lived one year in any State or territory and giving proof before the court of such residence.

4. **Minor Resident Aliens.**—A person having arrived in the United States under the age of eighteen years and having continued such residence until the time of his application for citizenship may at the age of twenty-one years, having lived in the United States five years, inclusive of the three years of his minority, be admitted as a citizen without making the formal declaration.

5. **Widow and Children of Declarant.**—If an alien should die after he has legally filed his declaration and taken the necessary oath of affirmation, but before he is actually naturalized, then his widow and children are entitled to all the rights and privileges of citizens upon taking the required oaths or affirmation which would have been required of him.

6. **Children of Naturalized Persons.**—Children of naturalized persons, if under twenty-one years of age at the time of the naturalization of their parents and residing in the United States, are considered as citizens thereof; and the children of citizens of the United States, though born in a foreign country, are citizens of the United States.

7. **Certificate of Naturalization.**—A person who has been naturalized according to law is entitled to a certificate, which is issued under the hand of the clerk and seal of the court. Such certificate may in certain circumstances be of much importance to a naturalized person and should be obtained and preserved.

Chinese Not Eligible.—The naturalization of Chinamen is expressly prohibited by Sec. 14, Chap. 126, Laws of 1882.

CITIZENSHIP AND SUFFRAGE

Naturalization, or citizenship, is governed by national law, which provides that no alien shall be naturalized until after five years' residence.

Suffrage, or the right to vote, is governed by the laws of the different States.

A Naturalized Citizen is not entitled to vote unless the law of the State where naturalized confers the privilege upon him, and in many States an alien may vote six months after landing, if he has declared his intention, under the laws of the United States, to become a citizen.

Inhabitants of Insular Possessions.—By the act of 1900 creating Hawaii a territory the inhabitants were declared to be citizens of the United States. The inhabitants of the Philippines and Porto Rico are entitled to full protection under the constitution, but not to the privileges of United States citizenship until Congress so decrees, by admitting the countries as States or organizing them as territories.

QUALIFICATIONS FOR VOTING

In all the States except Colorado, Idaho, Utah, and Wyoming, the right to vote at general elections is restricted to males of twenty-one years of age and upward.

Women are entitled to vote at all elections, the same as men, in Colorado, Idaho, Utah, and Wyoming, and at school elections in Connecticut, Illinois, Iowa, Kansas, Kentucky, Massachusetts, Minnesota, Nebraska, New Jersey, New York, North Dakota, Ohio, Oregon, South Dakota, Vermont, Washington, and Wisconsin, and in N. H. in school district meetings.

In New York women otherwise qualified, but for sex, vote at village elections and town meetings to raise money by tax or assessment if they own property in the village or town.

Persons Unable to Read cannot vote in Connecticut. In California a person unable to read the constitution in English and to write his name cannot vote. In Massachusetts in order to vote a person must be able to both read and write. In Mississippi a voter must be able to read or understand the constitution.

In all the States persons convicted of felony, and in most of the States paupers, idiots and lunatics are excluded from suffrage.

Naturalization Papers

DECLARATION OF INTENTION

I, A. B., do declare, on oath, that it is *bona fide* my intention to become a citizen of the United States, and to renounce forever all allegiance and fidelity to all and any foreign prince, potentate, state, and sovereignty whatever; and particularly to Edward VII, King of the United Kingdom of Great Britain and Ireland.

A. B.

Sworn in open court, this —— day of ——, 19—.

I, L. T., clerk of the —— court of ——, do certify that the above is a true copy of the original declaration of intention of A. B. to become a citizen of the United States, remaining on record at my office.

In testimony whereof, I have hereunto subscribed my name and affixed [SEAL] the seal of the said court, the —— day of ——, one thousand nine hundred and ——.

Oath of Alien

UNITED STATES OF AMERICA

STATE OF NEW YORK, County of ——, *ss.*

A. B., being duly sworn, doth depose and say, that he is a resident in the State of New York, and intends always to reside in the United States, and to become a citizen thereof as soon as he can be naturalized, and that he has taken such incipient measures as the laws of the United States require, to enable him to obtain naturalization.

Sworn before me, the —— day of ——, 19—.

J. S., Clerk of the U. S. District Court.

Certificate of Citizenship

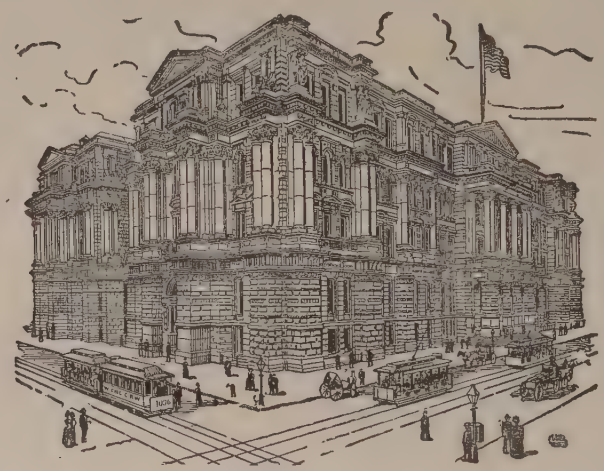
Be it remembered, that on the —— day of ——, in the year of our Lord one thousand nine hundred and ——, A. B., late of Limerick, Ireland, at present of the city of ——, in the State of ——, appeared in the —— court of —— (the said court being a court of record, having common-law jurisdiction and a clerk and seal), and applied to the said court to be admitted to become a citizen of the United States of America, pursuant to the directions of the act of Congress of the United States of America, entitled, "An act to establish an uniform rule of naturalization, and to repeal the acts heretofore passed on that subject;" and also to an act entitled 'An act in addition to an act, entitled 'An act to establish an uniform rule of naturalization, and to repeal the acts heretofore passed on that subject;' " and also to the "Act relative to evidence in cases of naturalization," passed 22d March, 1816; and also to an act entitled "An act in further addition to an act to establish an uniform rule

of naturalization, and to repeal the acts heretofore passed on that subject," passed May 26, 1824. And the said A. B., having thereupon produced to the court such evidence, made such declaration and renunciation, and taken such oath, as are by the said acts required:

Thereupon it was ordered by the said court, that the said A. B. be admitted, and he was accordingly admitted by the said court to be a citizen of the United States of America.

In testimony whereof, the seal of the said court is hereunto affixed this —— day of ——, in the year one thousand nine hundred and ——,
[SEAL] and in the —— year of our independence.

Per curiam. L. T., Clerk.



OFFICIAL POSITIONS UNDER THE CIVIL SERVICE ACT

The Civil Service Act, as it is commonly called, or the "Act to Regulate and Improve the Civil Service of the United States," as it is officially designated, was passed in January, 1883. It provides for the appointment of three commissioners, a chief examiner, a secretary, and other employees, and makes it the duty of the commissioners to aid the President in preparing rules for carrying the new act into effect, to make regulations to govern all examinations held under the provisions of the act, and to make investigations and report upon all matters touching

the enforcement and effect of the rules and regulations. The address of the commissioner is Washington, D. C.

Number of Positions.—There are about 235,000 positions in the executive civil service, about half of which are subject to competitive examination.

Qualifications of Applicants.—Applicants for examination must be citizens of the United States, and of the proper age. No person using intoxicating liquors to excess may be appointed. No discrimination is made on account of sex, color, or political or religious opinions. The limitations of age vary with the different services, but do not apply to any person honorably discharged from the military or naval service of the United States by reason of disability resulting from wounds or sickness incurred in the line of duty.

How Application must be Made.—Persons seeking to be examined must file an application blank. The blank for the departmental service at Washington, railway mail service, the Indian school service, and the government printing service should be requested directly of the civil service commission at Washington. The blank for the customs, postal, or internal revenue service must be requested in writing of the civil service board of examiners at the office where service is sought. These papers should be returned to the officers from whom they emanated.

Examinations are open to all persons qualified in respect to age, citizenship, legal residence, character, and health. More than one thousand local boards of examiners, designated by the commission, conduct examinations, make certification of eligibles, and perform such other work as may be assigned to them, at postoffices, custom houses, mints, and other local government institutions.

Register of Eligibles.—The name of each person obtaining a grade of 70 on the basis of 100 is entered in the order of his rating on the register of eligibles, with the names of those entitled to military or naval preference under Section 1,754, R. S., ahead of all others.

Appointments.—In case of a vacancy not filled by promotion, reduction, transfer, or reinstatement, the highest three of the sex called for on the appropriate register are certified for appointment, the apportionment being considered in appointments at Washington. In the absence of eligibles, or when the work is of short duration, temporary appointments, without examination, are permitted. The number of women applying for

clerical places is greatly in excess of the calls of appointing officers. The positions to which the largest numbers of them are appointed are those of assistant microscopist in the branch offices of the Bureau of Animal Industry at the various stockyards throughout the country, and teachers, matrons, seamstresses, etc., in the Indian service. A few receive appointments as stenographers and typewriters in the departmental service, and a few are appointed to technical and professional places.

Preference Claimants.—Persons who served in the military or naval service of the United States, and were discharged by reason of disabilities resulting from wounds or sickness incurred in the line of duty, are, under the civil service rules, given certain preferences. They are released from all maximum age limitations, are eligible for appointment at a grade of 65, while all others are obliged to obtain a grade of 70, and are certified to appointing officers before all others. Subject to the other conditions of the rules, a veteran of the rebellion or of the war with Spain, or the widow of any such person, or any army nurse of either war, may be reinstated without regard to the length of time he or she has been separated from the service.

Dismissals and Removals.—The civil service rules provide that no person in the executive civil service shall dismiss, or cause to be dismissed, or make any attempt to procure the dismissal of or in any manner change the official rank or compensation of any other person therein, because of his political or religious opinions or affiliations; that no removal shall be made from any position subject to competitive examination except for just cause and upon written charges filed with the head of the department or other appointing officer, and of which the accused shall have full notice and an opportunity to make defense; and that no person in the executive civil service shall use his official authority or official influence for the purpose of interfering with an election or controlling the result thereof. Such rules also provide that any person in the executive civil service who shall wilfully violate any provision of the civil service act or rules shall be dismissed from office.

Political Assessments.—The civil service act contains provisions forbidding any person in the service of the United States from levying upon or collecting from persons in the executive civil service contributions to be devoted to political objects, the collection of such contributions by any person in any public building of the United States, or discrimination against persons

who do not make such contributions or render political service. A violation of any of the provisions concerning political assessments, or their collection in a public building of the United States, is declared to be a misdemeanor, punishable by a fine not exceeding five thousand dollars, or by imprisonment for a term not exceeding three years, or by such fine and imprisonment both in the discretion of the court. The act also declares that when rules to carry its provisions into effect shall have been promulgated, "it shall be the duty of all officers of the United States in the departments and offices to which any such rules may relate, to aid, in all proper ways, in carrying said rules, and any modifications thereof, into effect."

Publications of the Commission.—Among the publications of the commission for free distribution are the following:

Manual of Examinations, giving places and dates of examinations, rules by which papers are rated, descriptions of examinations, specimen questions, and general information.

The Civil Service Act, Rules and Regulations.

The Annual Reports of the Commission, showing its work. These annual reports, of which nineteen have been issued, may be consulted at public libraries.

Total Abstinence Presidents.—The following should be of interest to all boys who are ambitious to make a place for themselves in the world: Twelve former presidents of the United States, at the earnest solicitation of Edward Cornelius Delaven of New York, appended their names to the following "temperance declaration": "Being satisfied from observation and experience, as well as medical testimony, that use of ardent spirits and drink is not only needless, but hurtful, and that the entire disuse of it would tend to promote the health, the virtue and the happiness of the community, we hereby express our conviction that should the people of the United States, and especially the young men, discountenance entirely the use of it, they would not only promote their personal benefit, but the good of our country and the world." The presidents so signing were: Andrew Jackson, James Madison, John Quincy Adams, Martin Van Buren, John Tyler, Millard Fillmore, Franklin Pierce, James Buchanan, Abraham Lincoln, Andrew Johnson.

PASSPORTS

A passport is a written permit to citizens of this country to travel unmolested in any foreign country. It recommends them to the protection of foreign governments where they may visit.

The Secretary of State of the United States, at Washington, is alone properly authorized to issue passports in the United States, but the ministers and other diplomatic representatives of our government abroad may grant, issue and verify them.

Application for a passport by a person in one of the insular possessions of the United States should be made to the chief executive of such possession.

None but citizens of the United States can receive passports. The charge is $5.00.

Any officer granting unlawfully a passport subjects himself to punishment by fine or imprisonment.

Passports may be issued by collectors of customs to United States vessels visiting foreign ports; and the master of a ship who sails without one to a foreign port makes himself liable to punishment.

The name, age and residence of the applicant, with a description of his personal appearance, are entered in it, to properly identify him.

PATENTS, TRADE MARKS AND COPYRIGHTS

PATENTS

A patent is a written instrument issued by the national government, giving the inventor the exclusive right to use, manufacture and sell his invention or improvement for a given term of years within the United States.

Without such a patent on his part any one else can use or sell anything he has invented. A patent secures to him the exclusive right.

A patent lasts for seventeen years; after that any one can make, use or sell the thing patented.

The patent is designed to encourage and protect inventions.

How Obtained.—To obtain a patent, application must be made to the Commissioner of Patents, accompanied by carefully prepared papers and drawings, describing the invention. These

are examined by the government officers to see whether the case is a proper one for a patent, and if it is, the patent (*also called letters patent*) is signed and sent to the inventor. Foreigners may also obtain patents as well as citizens of the United States.

A complete application comprises the petition, specification, oath and drawings and the model of specimen when required.

The Specifications.—In framing the specification it is well to pursue the following order:

1. Preamble giving the name and residence of the applicant and the title of the invention.
2. General statement of the object and nature of the invention.
3. Brief description of the drawings, showing what each view represents, unless no drawing is practicable.
4. Detailed description, explaining fully the alleged invention and the manner of constructing, practicing, operating and using it.
5. Claim or claims.
6. Signature of inventor.
7. Signatures of witnesses.

The Oath.—The applicant, if the inventor, must make oath that he believes himself to be the first and original discoverer or inventor of the art, machine, manufacture, composition or improvement for which he desires a patent; and that to his best knowledge and belief the same was never before known or used.

Drawings.—The applicant for a patent must furnish a drawing of his invention where the nature of the case admits of it. Drawings must be made upon pure white bristol board. The size of the sheet must be exactly ten by fifteen inches, leaving a margin of one inch all around the drawing.

All drawings must be made with a pen and with India ink.

The inventor's signature must be placed at the lower right-hand corner of the sheet and those of the witnesses at the lower left-hand corner.

Drawings should be rolled, not folded.

Models must clearly exhibit every feature of the machine which forms the subject of the claim, but no other matter except for illustration.

A working model is best where it can be furnished.

Amendments.—The applicant has a right to amend before or after the first rejection, and he may amend as often as the examining officers present any new references or reasons for rejection.

In case an applicant does not prosecute his application for two years after the date when the last official notice was made to him, it will be held that the application has been abandoned.

Extensions.—Patents since March 2, 1861, cannot be extended except by Congress.

Assignments.—Every patent or any interest therein shall be assignable in law by an instrument in writing. The patentee or his assigns may also grant and convey in like manner an exclusive right under his patent for the whole or any specified part of the United States.

Mark.—Every patented article, before it is sold, must be marked *patented,* so as to give notice to every one that it is patented.

Infringement is the making, using or selling the patented article without the permission of the owner of the patent. Its consequences are twofold: (1) The infringer must pay to the owner of the patent whatever damages the latter suffers through the infringement, equivalent usually to the profits which the infringer has made; (2) the court will compel the infringer to stop. By these two methods the exclusive right is enforced.

Fees Required by Law

1. **Application.**—On filing each original application for a patent except in design cases, fifteen dollars.

2. **Original Patent.**—On issuing each original patent, except in design cases, twenty dollars.

3. **In Design Cases.**—For three years and six months, ten dollars; for seven years, fifteen dollars; for fourteen years, thirty dollars.

4. **Caveat.**—On filing each caveat, ten dollars.

5. **Re-Issue of Patents.**—On every application for the reissue of a patent, thirty dollars.

6. **Disclaimer.**—On filing each disclaimer, ten dollars.

7. **Extension of Patent.**—On every application for the extension of a patent, fifty dollars.

8. **Grant of Extension.**—On the granting of every extension of a patent, fifty dollars.

9. **First Appeal.**—On an appeal for the first time from the primary examiners to the examiner-in-chief, ten dollars.

10. **Every Appeal.**—On every appeal from the examiner-in-chief to the commissioner, twenty dollars.

11. **Certified Copies of Patents.**—For certified copies of patents

and other papers, including certified printed copies, ten cents per hundred words.

12. **Recording.**—For recording every assignment, agreement, power of attorney, or other paper, of three hundred words or under, one dollar; of over three hundred and under one thousand words, two dollars; of over one thousand words, three dollars.

13. **Copies of Drawing.**—For copies of drawings, the reasonable cost of making them.

14. **Full Information.**—These fees may be paid to the Commissioner of Patents, or to the Treasurer or any of the assistant treasurers of the United States. If you desire to secure a patent write to the Commissioner of Patents, Washington, D. C., and you will receive all the necessary papers, blanks, and complete instructions and directions.

CAVEATS

A caveat, under the patent law, is a notice given to the office of the caveator's claims as inventor, in order to prevent the grant of a patent to another for the same alleged invention upon an application filed during the life of a caveat without notice to the caveator.

Any person who has made a new invention or discovery, and desires further time to mature the same, may, on payment of a fee of ten dollars, file in the patent office a caveat setting forth the object and the distinguishing characteristics of the invention, and praying protection of his right until he shall have matured his invention. Such caveat shall be filed in the confidential archives of the office and preserved in secrecy, and shall be operative for the term of one year from the filing thereof. The caveat may be renewed, on request in writing, by the payment of a second fee of ten dollars, and it will continue in force for one year from the payment of such second fee.

The caveat must comprise a specification, oath, and when the nature of the case admits of it, a drawing, and, like the application, must be limited to a single invention or improvement.

TRADE MARKS

A trade mark is a mark, emblem or symbol which a merchant or manufacturer uses to denote his own goods. It is usually attached to them and may be in the form of letters, words or ornamental designs.

The Right Acquired in a trade mark is the exclusive right to use it, or, in other words, the right to keep others from using that trade mark.

The right may be acquired by a citizen or foreigner and lasts as long as the trade mark is used.

Its Object is to protect both the owner and the public against imitations of an article which has acquired a good reputation. If it were not for this exclusive right, others might place the same mark on their goods, and thus deceive the public into believing they were manufactured by the same firm. This would deprive the one who had built up the trade of the benefit of his industry and skill or defraud the public into buying an inferior article.

Acquiring a Trade Mark.—Copyrights cannot be granted upon trade marks or labels intended to be used for any articles of manufacture.

If protection for such names or labels is desired, application must be made to the patent office, where they are registered, if admitted, at a fee of six dollars for labels and twenty-five dollars for trade marks

Infringement of a trade mark is prevented in the same way as in the case of patents, viz., by a suit against the infringer for damages and for an injunction to compel him to cease using it.

What Cannot be Used as a Trade Mark.—A generic name of an article cannot be used as a trade mark. A name merely descriptive, or representing the kind, quality, ingredients or characteristics of the article, is not available as valid trade marks. Geographical names used in their proper sense cannot become valid trade marks.

COPYRIGHT

Copyright is defined by the act of Congress of 1874 as the liberty of printing, publishing, compiling, executing and vending any original book, map, chart, dramatic or musical composition, engraving, print, photograph or negative thereof, or of a painting, drawing, chromo, statue or statuary and of models or designs intended to be perfected as works of art.

The object of such copyright is to encourage the writing of books or the production of anything that may conduce to the advancement of art and literature and the general improvement of mankind.

Copyright Laws

As Revised by an act of Congress, including the provisions for foreign copyright, of March 3, 1891.

1. **How Obtained.**—A printed copy of the title of the book, map, chart, dramatic or musical composition, engraving, cut, print, photograph or chromo, or a *description* of the painting, drawing, statue, statuary or model or design for a work of the fine arts, for which copyright is desired, must be delivered to the Librarian of Congress or deposited in the mail, within the United States, prepaid, addressed

Librarian of Congress,
Washington, D. C.

This may be done on or before the day of publication in this or any foreign country.

The style of print is immaterial; that of a typewriter will be accepted.

The printed title required may be a copy of the title page of such publications as have title pages. In other cases the title must be printed expressly for copyright entry, with name of claimant of copyright. But a separate title is required for each entry, and each title must be printed on paper as large as commercial note The title of periodical must include the date and number, and each number of the periodical requires a separate entry of copyright.

Full Name.—Every applicant for copyright should state distinctly the full name and residence of the claimant and whether the right is claimed as author, designer or proprietor. No affidavit or witness to the application is required.

2. **Copyright Fees.**—The legal fee for recording each copyright claim is fifty cents, and for a copy of this record (or certificate of copyright under seal of the office) an additional fee of fifty cents is required, making one dollar, if certificate is wanted, which will be mailed as soon as reached in the records.

For publications which are the productions of persons not citizens or residents of the United States the fee for recording title is one dollar, and fifty cents additional for a copy of the record.

Copies Required.—Not later than the day of publication in this country or abroad, two complete copies of the best edition of each book or other article must be delivered or deposited in the mail within the United States, addressed to Librarian of Congress, Washington, D. C.

Must Be American.—Books must be printed from type set in the United States or from plates made therefrom; photographs from negatives made in the United States; chromos and lithographs from drawings on stone or transfers therefrom made in the United States.

Penalty.—Without the deposit of copies above required the copyright is void and penalty of twenty-five dollars is incurred. No copy is required to be deposited elsewhere.

New Edition.—The law requires a copy of each new edition wherein any substantial changes are made to be deposited with the Librarian of Congress.

Notice by Imprint.—No copyright is valid unless notice is given by inserting in every copy published, on the title page or following, if it be book, or if a map, chart, musical composition, print, cut, engraving, photograph, painting, drawing, chromo, statue, statuary, or model or design intended to be perfected as a work of the fine arts, by inscribing upon some portion thereof or on the substance on which the same is mounted the following words, viz., "Entered According to Act of Congress in the Year ——, by ———, in the office of the Librarian of Congress at Washington," or the words "Copyright, 19—, by ———."

Penalty for False Claim.—The law imposes a penalty of one hundred dollars upon any person who has not obtained copyright who shall insert the notice, "Entered According to Act of Congress" or "Copyright," or words of the same import in or upon any book or article.

Translation, Etc.—The copyright law secures to authors and their assigns the exclusive right to translate or to dramatize any of their works; no notice or record is required to enforce this right.

Duration of Copyright.—The original term of copyright runs for twenty-eight years. Within six months of the end of that time the author or designer, or his widow or children, may secure a renewal for the further term of fourteen years. Applications for renewal must be accompanied by a printed title and fee and by explicit statement of ownership in the case of the author or relationship in the case of his heirs, and must state definitely the date and place of entry of the original copyright. Within two months from date of renewal the record thereof must be advertised in an American newspaper for four weeks.

Time of Publication.—A copyright may be secured for a projected work as well as for a completed work. The publication must, however, take place "within a reasonable time."

Assignments.—Copyrights are assignable by any instrument of writing. Such assignment must be recorded in the office of the Librarian of Congress within sixty days from execution. The fee for this record is one dollar and for a certificate copy of assignment one dollar. A duplicate copy of any copyright record costs fifty cents.

Works of More than One Volume must have a copyright entered for each volume. Two copies of each volume should be sent. So also of the successive numbers of a periodical or other articles produced in serials.

International Copyright.—The provision as to copyright entry in the United States by foreign authors, etc., by act of Congress approved March 3, 1891 (which took effect July 1, 1891), is the same as the foregoing, except the difference in the cost, as stated above.

The right of citizens or subjects of a foreign nation to copyright in the United States extends by presidential proclamation to Great Britain, France, Belgium, Switzerland, Germany, Italy, Denmark and Portugal; and Americans can secure copyrights in those countries by making their arrangements there in conformity with the laws of those countries. The Librarian of Congress cannot take charge of any foreign copyright business.

Foreign Copyright.—Americans to obtain a copyright in Great Britain must have title entered at Stationer's Hall, London, the fee for which is five shillings sterling, and five shillings additional if a certified copy of entry is required. The work must be published in Great Britain or in her dominions simultaneously with its publication in the United States, and five copies of the publication are required, one for the British Museum and four on demand of the Company of Stationers for four other libraries. Copyright may be secured in France by an American by publishing two copies of the publication at the Ministry of the Interior at Paris No fee or entry title required. Copyright in Canada is to be registered with the Minister of Agriculture at Ottawa; fee, one dollar for registry and fifty cents for certificate, and the work to be published in Canada and two copies deposited.

MARRIAGE AND DIVORCE

MARRIAGE LAWS

License.—Marriage licenses are required in all the States and territories except Alaska, New Jersey (if residents, otherwise required), New Mexico, New York, and South Carolina.

Age to Contract Without Consent of Parents.—In most of the States which have laws on the subject twenty-one years is the age for males; in California, Delaware, Idaho, Maryland, New York and Dakota, eighteen; in Tennessee, sixteen; and for females, twenty-one years in Connecticut, Florida, Illinois, Iowa, Kentucky, Louisiana, Minnesota, Montana, Nebraska, North Carolina, Pennsylvania, Rhode Island, South Carolina, South Dakota, Utah, Virginia, West Virginia, Wisconsin, and Wyoming, and eighteen in all the other States having laws, except Delaware, District of Columbia, Idaho, Maryland, New York, and Tennessee, in which it is sixteen years, and California and North Dakota, fifteen.

Voidable.—Marriages are voidable in nearly all the States when contracted under the age of consent to cohabit, through fraud, or if one of the parties is suffering from insanity.

Prohibition of.—Marriages between whites and persons of negro descent are prohibited and punishable in Alabama, Arizona, Arkansas, California, Colorado, Delaware, Florida, Georgia, Idaho, Indiana, Indian Territory, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Virginia, and West Virginia.

Marriages between whites and Indians are void in Arizona, North Carolina, Oregon, and South Carolina.

Marriages between whites and Chinese are void in Arizona, California, Mississippi, Oregon, and Utah.

Marriage between first cousins is forbidden in Alaska, Arizona, Arkansas, Illinois, Indiana, Louisiana, Kansas, Missouri, Nevada, New Hampshire, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Washington, and Wyoming, and in some of them is declared incestuous and void, and marriage with step-relatives is forbidden

in all the States except Florida, Hawaiian Islands, Iowa, Kentucky, Minnesota, New York, Tennessee, Wisconsin.

Connecticut and Minnesota prohibit the marriage of an epileptic, imbecile, or feeble-minded woman under forty-five years of age, or cohabitation by any male of this description with a woman under forty-five years of age, and marriage of lunatics is void in the District of Columbia, Kentucky, Maine, Massachusetts, Nebraska; persons having sexual diseases in Michigan.

*DIVORCE LAWS

Previous Residence Required.—Six months in Idaho, Nebraska, Nevada, South Dakota, and Texas; one year in Alabama, Arizona, Arkansas, California, Colorado (except in case of adultery in State), Georgia, Illinois, Indian Territory, Iowa, Kansas, Kentucky, Maine, Michigan, Minnesota (same as Colorado), Mississippi, Missouri, Montana, New Hampshire, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming; two years in District of Columbia, Florida, Indiana, Maryland, Rhode Island, and Tennessee; three years in Alaska, Connecticut, and Massachusetts (if when married both parties were residents; otherwise five years); five years in North Carolina; actual residence at time of bringing suit in Delaware, Louisiana, New Jersey, and New York (if married in the State), or both parties resident at time of offense.

Absolute, Causes for.—The violation of the marriage vow is cause for absolute divorce in all the States and territories, except South Carolina, which has no divorce laws.

The living of husband or wife at the time of the second marriage is a cause in most States, and physical incapacity in all the States except California, Connecticut, Idaho, Iowa, Louisiana, New York, North Dakota, South Carolina, South Dakota, and Vermont. In most of these States it renders marriage voidable.

Willful desertion, one year in Arkansas, California, Colorado, Florida, Idaho, Indian Territory, Kansas, Kentucky

*Special statutes exist in each state to which reference must be had for accurate statement.

Minnesota, Missouri, Montana, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, Wisconsin, and Wyoming; two years in Alabama, Alaska, Arizona, Illinois, Indiana, Iowa, Michigan, Mississippi, Nebraska, New Jersey, Pennsylvania, and Tennessee; three years in Connecticut, Delaware, Georgia, Hawaiian Islands, Maine, Maryland, Massachusetts, New Hampshire, Ohio, Texas, Vermont, Virginia, and West Virginia; five years in Rhode Island, though the court may decree a divorce for a shorter period. Both parties living apart without cohabitation, five years, in Kentucky; ten years, Rhode Island; no time specified in Louisiana and New Mexico.

Habitual drunkenness in all the States and territories, except Arizona, Maryland, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, Texas, Vermont, Virginia, and West Virginia. "Intoxication from the use of intoxicating liquors, opium, or other drugs," in Maine, Massachusetts, Mississippi, North Dakota, and Rhode Island.

"Imprisonment for felony," or "conviction for felony," in all the States and territories (with limitations), except Florida, Maine, Maryland, New Jersey, New York, North and South Carolina. In Maine sentence to imprisonment for life and confinement under it dissolves marriage without legal process.

"Cruel and abusive treatment," "intolerable cruelty," "extreme cruelty," "repeated cruelty," or "inhuman treatment," in all the States, except District of Columbia, Maryland, Michigan, New Jersey, New York, North and South Carolina, Tennessee, Virginia, and West Virginia, and discretionary in Georgia; treatment seriously injuring health or endangering reason in New Hampshire.

Failure by the husband to provide, one year in California, Colorado, Idaho, Montana, Nevada, North Dakota, Wyoming, and Rhode Island; two years in Arizona, Indiana, and Nebraska; three years in New Hampshire; no time specified in Maine, Massachusetts, Nebraska, New Mexico, South Dakota, Utah, Vermont, and Washington.

Fraud and fraudulent contract, in Connecticut, Delaware, Georgia, Kansas, Kentucky, Ohio, Oklahoma, Pennsylvania, and Washington. (When the marriage is procured by fraud,

force or coercion, and is not subsequently confirmed by the acts of the injured party.)

Absence without being heard from, three years in New Hampshire and Ohio; seven years in Connecticut and Vermont; voluntary separation, five years in Wisconsin; ten years in Rhode Island.

"Ungovernable temper," in Kentucky; "habitual indulgence in violent and ungovernable temper," in Florida; "cruel treatment, outrages, or excesses as to render their living together insupportable," in Arkansas, Kentucky, Louisiana, Missouri, and Texas; "indignities as render life burdensome," in Missouri, Oregon, Pennsylvania, Washington, and Wyoming; attempt to murder the other party, in Illinois, Louisiana, and Tennessee; "pregnancy at the time of marriage without husband's knowledge or agency," in Alabama, Arizona, Georgia, Kansas, Kentucky, Mississippi, Missouri, New Mexico, North Carolina, Oklahoma, Tennessee, Virginia, and West Virginia.

Insanity or idiocy at time of marriage, in Georgia, Mississippi, and Virginia; insanity lasting ten years, in Washington; in Florida, four years; insanity and six years' confinement in an asylum, on six years' residence, in Idaho; permanent insanity in Arkansas and Indian Territory.

Other causes in different States are as follows: "Commission of the crime against nature," in Alabama; "husband notoriously immoral before marriage, unknown to wife," in West Virginia; "fugitive from justice," in Louisiana, North Carolina, and Virginia; "gross misbehavior or wickedness," in Rhode Island; "any gross neglect of duty," in Kansas, Ohio, and Oklahoma; "refusal of wife to remove into the State," in Tennessee; "joining any religious sect that believes marriage unlawful, and refusing to cohabit," in Kentucky, Massachusetts, and New Hampshire; vagrancy of the husband," in Missouri; "refusal of wife to cohabit for twelve months," in North Carolina; "excesses," in Texas; "where wife by cruel and barbarous treatment renders condition of husband intolerable," in Pennsylvania; "concealment of sexual disease," in Kentucky; obtaining divorce in another State, in Michigan and Ohio; "conviction of a felony prior to marriage," in Arizona, Missouri, Virginia, and West Vir-

ginia; "incurable Chinese leprosy," in Hawaiian Islands; "offering indignities, rendering condition intolerable," in the Indian Territory; voluntary separation for five years, in Wisconsin. Public defamation of other party, in Louisiana. In Georgia an absolute divorce is granted only after the concurrent verdict of two juries, at different terms of the court. In New York absolute divorce is granted for but one cause, adultery. Collusion and connivance bar a divorce, also any condonation of a violation of the marriage vow.

Startling Facts.—The statistics tell a story of marital disruption that seems almost incredible. In Ohio, one divorce in every twenty-five marriages was the ratio in 1870, and one divorce in eight marriages the ratio in 1902. Other states might be cited as illustrative of the tendency to seek relief from marital responsibilities and incompatibilities in the courts. In 1867 Indiana had 1,096 divorces, the largest number for that year in any state. In 1900 the number had increased to 4,699, or one to every 5.7 marriages of the year. Michigan divorces increased from 449 in 1867 to 1,339 in 1886 and 2,418 in 1900. The ratio in that State is now one divorce to eleven marriages. Illinois granted 1,071 divorces in 1867 and 2,606 in 1886. Connecticut and Vermont appear to be the only States in which the divorce evil has been checked. The former State had fewer divorces in 1900 than in 1867. Changes in the statutes and in the administration of the various county courts largely account for improved conditions in these States.

Alarming Increase.—In the United States during the twenty years from 1867 to 1886 there were 328,716 divorces granted, representing an increase of 157 per cent, while the population increased little more than 60 per cent. Statistics show that during 1905 there was one divorce for every 16 2-3 marriages throughout the entire United States. In contrast to this picture it is interesting to contemplate the divorce statistics of Canada. In the latter country sixty-nine divorces were granted in the thirty-four years between 1867 and 1901.

PART IX

Facts, Legal Pointers, Building Associations, Pensions, etc.

1818 **WM. M. EVARTS** 1901

Noted Lawyer and Statesman

The Man who Received $50,000 for a Single Opinion

FACTS AND FIGURES FOR BUSINESS MEN

HOW TO BECOME WEALTHY

The way to wealth, says Franklin, is as plain as the way to market. It depends chiefly on two words—industry and frugality. It is not what a man earns, but what he saves that makes him rich.

From the following table it appears that if a person saves 2¾ cents per day from the time he is twenty-one till he is seventy, the total, with compound interest, will amount to $2,900, and a daily saving of 27½ cents reaches the important sum of $29,000. Save all you can in a prudent and systematic manner for a time of possible want, but act justly by paying your debts, and liberally by assisting those in need, and helping in a good cause.

A Table of Daily Savings at Compound Interest

Cents per Day.	Per Year.	In Ten Years.	Fifty Years.
2¾	$ 10	$ 130	$ 2,900
5¼	20	260	5,800
11	40	520	11,600
27½	100	1,300	29,000
55	200	2,600	58,000
1.10	400	5,200	116,000
1.37	500	6,500	145,000

Salaries of Presidents of Big Railroad and Express Companies.

Pennsylvania Railroad Company	$75,000
Chicago, Rock Island and Pacific Railway Company	50,000
Philadelphia and Reading Railway Company	50,000
New York Central and Hudson River Railroad Company	50,000
Great Northern Railway Company	50,000
Southern Railway Company	50,000
Adams Express Company	50,000
American Express Company	50,000
United States Express Company	50,000
Erie Railroad Company	40,000
Lehigh Valley Railroad Company	40,000
Atchison System ("Santa Fe")	40,000
Chicago and Northwestern Railway Company	40,000

Salaries of Bank Presidents.

National City Bank, New York	$60,000
First National Bank, Chicago	40,000
Bank of Germany, Berlin	30,000
Bank of England, London	10,000

Salaries of University Professors.

The following table, compiled from latest authentic sources, shows the highest average salaries paid to Professors in Universities in the United States:

Wisconsin State University	$4,500
Harvard University	4,000
Yale University	3,750
Brown University	3,000
Missouri State University	3,000
Illinois State University	3,000
Indiana State University	2,500
Minnesota State University	2,400
Kansas State University	2,200
Other State Universities	2,000

NOTE.—It is very difficult to get the salaries of presidents of Colleges and Universities for the reason that their salaries are never published in their annual reports, but by careful and painstaking investigation we have learned that presidents of large universities receive from five to ten thousand dollars a year for their services. For example, President Harper of the University of Chicago received $10,000 for his services as president of said university, and besides $7,000 as the head of the department of Hebrew, making him a net income of $17,000 a year. Prof. Harper died Jan. 16, 1906.

Salaries of Government Officers of the Principal Countries of the World.

A comparison of the salaries of the principal executive and legislative officers of the United States Government with those of similar officers in other countries shows the former to be relatively small. The following tables of salaries paid by the different Governments are compiled from the latest authentic sources:

United States.

President	$50,000
Vice-President	8,000
Speaker of House of Representatives	8,000
Cabinet Officers	8,000
Senators	5,000
Representatives	5,000

Besides their salaries the members of Congress receive 20 cents per mile for traveling to and from the seat of Government.

French Republic.

President	$240,000
Speaker of Chamber of Deputies	14,000
Cabinet Officers	12,000
Members of Senate	1,800
Members of Chamber of Deputies	1,800

Russia.

Czar	$12,000,000
Minister of Foreign Affairs	15,288

Germany.

Emperor	$3,852,770
Minister of Foreign Affairs	23,000
Other Cabinet Officers	6,000

Members of the Reichstag (Parliament) receive 15 marks (=$3.) a day for such time as they are in session.

Great Britain.

King and Queen	$2,950,000
Prime Minister	50,000
Principal Cabinet Officers	25,000
Other Cabinet Officers	10,000

The members of Parliament receive no compensation, but in many cases they are supported by their constituents.

Italy.

King	$2,858,000
Prime Minister	22,000
Other Cabinet Officers	15,000

The members of Parliament receive no compensation, but have many perquisites, including free transportation on railroads, street cars, etc.

Canada.

Governor General	$50,000
Prime Minister	8,000
Other Cabinet Officers	7,000
Members of Parliament	1,500

Australian Colonies.

Prime Ministers	$9,100
Other Cabinet Officers	8,000
Members of Parliament	1,500

Argentine Republic.

President	$36,000
Vice-President	18,000
Cabinet Officers	16,500
Members of Both Houses of Congress	12,000

Big Payrolls in 1906.

The United States Steel Corporation has upon its payrolls 166,205 names, exclusive of those who earn what is called "wages." Of these, 122,690 receive salaries of $800 or a little less; 43.987 receive salaries ranging between $800 and $2,500; 1,308 receive salaries ranging from $2,500 to $5,000; 156 receive salaries ranging from $5,000 to $10,000; 51 are paid salaries ranging from $10,000 to $20,000, and 13 are paid salaries of $20,000 or more, the president's salary being $100,000.

The Government of the United States has the largest payrolls in the world, the Post Office Department alone having upon its payroll 280,000 names.

The following compilation shows the number of civilian office holders on the payrolls of the United States receiving salaries to the amount of $4,000 or more per annum: 51 receive salaries of $4,000; 2 receive salaries of $4,200; 131 receive salaries of $4,500; 140 receive salaries of $5,000; 1 receives a salary of $5,396; 34 receive salaries of $5,500; 1 receives a salary of $5,635; 37 receive salaries of $6,000; 16 receive salaries of $7,000; 36 receive salaries of $7,500; 16 receive salaries of $8,000; 19 receive salaries of $10,000; 1 receives a salary of $10,500; 1 receives a salary of $11,000; 7 receive salaries of $12,000; 1 receives a salary of $13,500; 6 receive salaries of $17,500; 1 receives a salary of $25,000; 1 receives a salary of $30,000; and the President receives a salary of $50,000. Total of salaries of $4,000 or more, $2,950,931.

PRACTICAL LAW AND BUSINESS POINTERS

Consulting Lawyer.—In minor matters it is better to lose your money than to rush into litigation, but in matters of any importance never act without the advice of good counsel. You would not think of trying to amputate your little finger without a surgeon's help. Much less should you run the risk of losing thousands of dollars through error which might be corrected by a little timely advice.

An Attorney's Power.—An attorney-at-law has no implied authority to compound or give up any rights of his clients, but an attorney of record may consent to a judgment against his client.

Bank Checks.—The acceptance of a bank check by a creditor is not an absolute but a conditional payment of the drawer's debt.

A drawer of a bank check cannot countermand it so as to affect it in the hands of a holder in good faith.

Waiver of Homestead and Personal Property Exemption.—In some states a clause in a promissory note expressly waiving the benefit of all laws exempting real or personal property from levy and sale, being contrary to public policy, is inoperative, and confers no right to levy upon and sell personal property which is exempt. In Pennsylvania, however, the exemption can be waived and all leases and judgment notes usually contain a waiver.

Distress for Rent.—The right of a landlord to issue a warrant authorizing a levy upon property of a tenant for the satisfaction of rent is looked upon in this country with disfavor, and in some of the States the right has been abolished.

When property temporarily in the possession of a tenant, but belonging to another, is taken under a distress against the tenant, the tenant will be liable to the owner for its value. But in Pennsylvania all goods found upon new premises (with but few exceptions) are liable for rent under a distress and levy, no matter to whom they belong.

Wrongful Levy of Execution.—For wrongful levy on property, when an officer, under an execution, seizes the goods

of some other person than the defendant in the execution, the owner may maintain an action, and trespass is the usual remedy of the owner; but trover may be maintained in many cases and in some cases replevin will lie.

HUSBAND AND WIFE

Liability of Husband for Goods Sold to Wife.—When goods necessary and suitable to the position in life of a wife are sold to her, the jury will be justified in finding a verdict against the husband, if the husband authorized her either expressly or impliedly (e. g. by permitting it as a common practice), or if the husband himself neglected or refused to furnish her with such necessaries. This rule is subject to exceptions. In some States also a married woman can after filing certificate do business.

Wife Living Apart from her Husband.—A husband is not liable for necessaries furnished his wife when she lives separate from him under decree of court not requiring him to maintain her, and in some cases where she lives apart by agreement he is not liable.

Separate Maintenance.—Where the wife leaves her husband without sufficient cause, she will not be entitled to a decree for a separate maintenance.

When she leaves him with his consent and on account of his ill treatment, he is liable for the expense of a separate maintenance.

RIGHTS AND OBLIGATIONS OF PARENTS AND CHILDREN

In ancient domestic life the father ruled as absolute monarch over the family. So it is still in oriental countries. Christian civilization has greatly modified this and laws have been enacted that set forth the relation of parent and child, defining the duties and obligations of each.

RIGHTS OF PARENTS

1. As long as a child is under age he is subject to the control of the parents, who have all reasonable authority to enforce obedience. As long as a child is properly treated by the parents no one has a right to interfere nor to take away and retain a child against their wishes.

2. **Adopting a Child.**—When a child is adopted by another family its parents lose their claim upon it and the adopting persons take their place. A child cannot generally speaking be adopted without the consent of its parents.

A child over fourteen must himself in some States consent to the adoption. The court has in all cases the right to consent to or refuse the adoption.

Application must, therefore, be made at the county court and the judge will consider it and pass upon it.

3. **Punishment.**—Parents have a right to punish their minor children, providing they are not guilty of cruelty. Brutality is severely punished by law as a crime. The punishment must be reasonable, leaving no bruises nor injuring the health of the child.

4. **Claims upon Earnings.**—While the child is a minor parents have a right to all his earnings. They can claim them of his employer. Parents, however, may free the child and allow him to collect and use his own wages. When this is once made public the parents cannot thereafter collect the child's wages.

5. **A Runaway Child.**—A child has no right to leave home without permission of the parents; if he does he can be brought back by force. Relations or others who would keep him can be forced by law to give him up unless it can be shown that the father is brutal in his treatment of the child or is not capable because of drunkenness or other causes to properly care for the child.

OBLIGATIONS OF PARENTS

Obligation to Support.—The law requires that parents shall support their minor children. A child having property

of his own does not relieve the parents from supporting him. They can, however, by applying to the court, get permission to use a part or all of the income or principal of the child's property for his support. Beyond this the parents have no claim upon or control over the child's property. This should be managed by a legally appointed guardian.

CHILDREN'S RIGHTS AND OBLIGATIONS

1. A child can own property, over which the parents have no control, except the use of the income or principal of the same for the support of the child, as stated above.

2. In some States where it is shown that parents are unable to support themselves the child is under legal obligations to support and care for them, at least do what he can toward such support.

3. If a child commits a premeditated crime he is personally liable; parents cannot be held responsible for crimes committed by their minor children.

4. **Guardian.**—A guardian may be appointed over an orphan child, or the child may under certain circumstances nominate or suggest his own guardian if he be of a certain age (14 years in Pennsylvania), who in a legal sense exercises all the authority of a parent.

FENCE LAWS

Fences are mostly regulated by statutes of the State where located. There are certain laws, however, that are applicable to them generally.

Legal Fence.—The laws of the several States provide what shall constitute a legal fence, which generally must be four feet high, with sufficient boards or wire, or both, to turn cattle.

Damages.—As a general rule all premises must be properly inclosed before damages can be recovered from the owner of trespassing stock for injury thereto, but in some States the rule is otherwise.

Partition, or Division Fences.—The owners of adjacent

tracts of land, in most of the States, are bound to erect and maintain one-half of a suitable fence along the line separating such tracts.

Repairs.—Each party is bound to look after his own part of the fence and keep it in good repair, and he must restrain his own stock from trespassing upon the lands of his neighbor.

Fence-Viewers, in some of the States, are provided for by statute to determine the just share of each party liable to maintain a partition fence, and suitable methods are provided for enforcing their awards.

Railroads are required by statute in many States to fence

THEY WENT TO LAW ABOUT THE LINE FENCE—THE SUIT BEGINS.

their tracts, and a failure to do so renders them liable for stock killed by reason of non-compliance with the statute.

Barb-wire fences should be so used and cared for as not to endanger persons and property, and the use of such fences imposes upon those who use them care reasonably proportionate to their danger. In some States statutes restrict their use.

Railroads using barb-wire fences must use due diligence in running their trains, not only to avoid killing stock, but to avoid precipitating them by fright against a fence to be mangled or bruised.

TRESPASSING AND MISCHIEVOUS ANIMALS

Owners of domestic animals, such as cows, horses, sheep, hogs, poultry and dogs, must not permit them to stray upon the premises of others, or they will be liable in trespass for damages.

No Right to Kill or Injure.—But those upon whose premises such animals trespass are not justified in killing or injuring the animals, no matter how aggravating or repeated the acts of trespass may be, unless the animal killed is at the

THE SUIT ENDS AND THE LAWYER GETS BOTH COW AND MILK.

time attacking another animal and is killed to save the life of the latter.

Remedy Provided.—The persons injured by such trespassing have their remedy in an action at law for damages, and there are statutes providing for the taking up of such animals and holding them at the expense of their owner or impounding them as estrays.

Mischievous Animals.—The owner of a mischievous animal, known to him to be so, is responsible, when he permits him to go at large, for the damages he may do, and any one may justify the killing of a ferocious animal at large.

The owner of such an animal may be indicted for a common nuisance.

If a person enters the barn or pasture of another, and is injured by a vicious horse or bull, it must be shown that the owner used all reasonable means in the care of his animals for the safety of his help and neighbors.

If a person enters the land of another, and is injured, he must show good cause for entering upon said land, and also prove ordinary caution, in going where cattle and horses were kept.

RESPONSIBILITY OF OWNING A DOG

A person has a right to keep a dog to guard his premises, but not to put him unconfined at the entrance of his house; because a person coming there on a social or business errand may be injured by him. But if the dog is chained, and a visitor incautiously goes so near him that he is bitten, he has no right of action against the owner.

Liable for Damage.—Owners of dogs must keep them from straying upon the public highway, or they will be responsible for any damage caused by their annoyance of travelers, scaring of children, barking after teams, etc.

If a dog strays upon the premises and kills or injures any other domestic animal, its owner is liable for damages.

Dangerous Dogs running at large may lawfully be killed when their ferocity is known to their owner, or in self-defense; and when bitten by a rabid animal a dog may be lawfully killed by any one.

But a person is not justified in killing a dog without notice to the owner, merely because it barks around his house at night.

The owner of a vicious dog will not be held liable for the dog's biting a person unless it can be shown that the dog had previously exhibited a propensity to violence, and that the owner was acquainted with this propensity. This is the common law, but in many States statutes have been passed making the owner or keeper of a dog liable for any damage done by it whether the owner or keeper knew that it was vicious or not.

BREACH OF TRUST

Breach of trust is the willful misappropriation of personal property by one who has been intrusted with its possession in confidence.

As Distinguished from Larceny.—The cases where personal property is taken by a person to whom it has been intrusted, and who converts it to his own use, present very nice discriminations of mere breaches of trust from larceny.

If a person has property in goods, and a right to the possession of them, he cannot, in general, commit the crime of larceny in taking them.

The courts generally lean toward construing the offense to be larceny, and not merely a breach of trust, where the party gains possession by some false pretense, with the original intent to steal.

A bailee who fraudulently converts the property intrusted to him to his own use is guilty not simply of a breach of trust, which is only a trespass, but of larceny, or embezzlement, which are crimes.

LEGAL GIFTS

Definition.—A gift is the voluntary and gratuitous transfer or conveyance of the right and possession of property by one person to another.

Names of Parties.—The giver of the property is called the donor, the receiver the donee.

Who May Make a Gift.—Any person competent to transact ordinary business may give whatever he owns to any other person.

Delivery to the donee is essential to a gift, and there must also be actual acceptance. It must be an actual delivery, so far as the subject is capable of delivery. If the thing be not capable of actual delivery, there must be some act equivalent to it; something sufficient to work an immediate change in the control of the property. In the absence of proof to the contrary the law presumes acceptance when the gift is manifestly for the benefit of the donor.

Looked Upon with Suspicion.—The law generally looks with some degree of suspicion upon gifts, and they are usually

considered to be fraudulent if creditors or others become sufferers thereby.

Retracting.—Where a gift has been executed by delivery of possession, it is not in the donor's power to retract it; but so long as the gift has not been completed by delivery of possession, it is not properly a gift, but a contract, and this a person cannot be compelled to perform but upon good and sufficient consideration.

A Gift Made in Prospect of Death may be revoked by the donor at any time during his life, though it be completed and executed by delivery and acceptance.

A Gift may be Annulled by the creditors of the donor, if he was insolvent at the time of the gift and it diminished the creditor's fund.

FINDER OF LOST PROPERTY

The general law on this subject is, that the finder of money or goods if he takes possession of the property, is to use all due means to discover the rightful owner; and if he appropriate the articles to his own use knowing the rightful owner, or having the means of finding him, he is held guilty of larceny. Failing to find the rightful owner, after taking due means to do so, the finder of the lost articles is entitled to regard them as his own property. Some States prescribe by statute the means to be taken by finders to advertise the property.

RULES GOVERNING THE FINDING OF LOST PROPERTY

1. The finder of lost property is the owner of it against all the world but the original owner. Thus, it is held that a stranger who finds lost money in a shop may retain it as against the shop owner; but the contrary has also been held, at least where the money or a purse was left on the counter.

Money Left on a Desk in a bank, provided for the use of its depositors, is not lost so as to entitle the finder to the same, as against the bank.

An Aerolite which buries itself in the ground is regarded as an accretion to the land, and belongs to the owner of the soil on which it falls.

2. The finder is always at liberty to leave untouched what he finds, and cannot be made accountable for any injury thereafter happening to it.

3. The finder may demand from the owner all his expenses necessarily incurred in keeping and preserving the property, and properly advertising and like charges for the owner's benefit.

4. If a reward be legally offered, specific and certain or capable of being made so by reference to a standard, the finder complying with the terms of the advertisement becomes entitled to such reward, and may sue for it.

5. If the finder of lost goods, or goods which are reasonably supposed by him to have been lost, appropriates them to his own use, really believing when he takes them that the owner cannot be found, it is not larceny; but if he takes them reasonably believing that the owner can be found and thus appropriates them it is larceny.

THE LAW OF SUBSCRIPTIONS

Subscription is the placing of a signature under a written or printed agreement. By such an act a person contracts, in writing, to pay a sum of money for a specific purpose; as a subscription to a charitable institution, a subscription for a book, etc.

Subscription Papers.—"The law on the subject of these subscription papers," says Parsons, "and of all voluntary promises of contribution, is substantially this: No such promises are binding unless something is paid for them, or unless some party for whose benefit they are made (and this party may be one or more of the subscribers), at the request, express or implied, of the promisor, and on the faith of the subscription, incurs actual expense or loss, or enters into valid contracts with other parties which will occasion expense or loss. As the objection to these promises, or the doubt about them, comes from the want of consideration, it may be removed by a seal to each name, or by one seal which is declared in the instrument to be the seal of each."

Book Subscriptions.—A person subscribing for a book is bound to take it when delivered by the agent, provided it corresponds with the sample copy shown him when the subscription was given. The agent or publisher may recover at law the price of the book should the subscriber refuse to take it when presented to him.

Newspapers and Other Periodicals.—There is no postal law regulating the transactions between publishers and subscribers. The ordinary rules of contract governs all relations between the parties concerned, and the postoffice has no part except to deliver the article, or return it when ordered to do so.

If the publisher of any paper or periodical sends his paper or magazine, the postmaster must deliver it, if the person to whom it is sent will take it. If he will not take it, the postmaster must notify the publisher.

If a person subscribes for a periodical for a given period, say one year, and the publisher sends it accordingly, the subscriber cannot terminate the contract by stopping his paper at any time during the year. But at the end of the year the subscriber may stop his paper even without paying the subscription due. He is under no legal obligation to take the paper another year. The fact that he has not paid for the expired year's subscription does not bind him to continue taking the paper. He can stop taking it at the end of the year and the publisher can sue for and collect his year's subscription only.

If at the end of the year the publisher continues to send his paper and the subscriber to receive it, the sending is the offer of another year's subscription at the sa price, and the receiving of the paper is an acceptance. The implied contract from such action is a renewal of the subscription; and the publisher can send the paper for the renewed term of one year and collect the subscription price for that year as well as the preceding.

If the publisher advertises terms of subscription, all parties taking the paper under these conditions will be held according to the conditions.

WORKING ON SUNDAYS AND LEGAL HOLIDAYS.

Sundays.—No one is bound to work on Sunday in performance of his contract, unless the work by its very nature or by express agreement is to be done on that day and can be then done without a breach of law.

Holidays.—There are no laws which forbid or compel a laborer to work on holidays. A laborer must either work on such days or forfeit his wages. In most parts of our country

people do not work on Christmas, New Year's, Fourth of July, and, in the East, on Thanksgiving Day, and, in the North, on Decoration Day, yet most employers pay their employees their usual wages. Where this custom is common and well known it may so govern that wages can be collected, though the work is not done.

BUILDING AND LOAN ASSOCIATIONS

These associations, usually incorporated, are established for the purpose of loaning money to their members upon real estate security. They make it their object to enable persons having a lot to borrow money thereon for the purpose of erecting a dwelling, allowing them to repay the money in installments amounting to little more than ordinary monthly rent. When the full amount is paid up the borrower becomes owner of the property.

Interest.—In considering the question of usury in a loan from a building association, payments made by the borrower as dues are not to be considered as interest, as such payments are made in order to acquire an interest in the property of the association and not for the use of money.

Fines imposed for default in payment of dues and interest cannot be collected by foreclosure of a mortgage given to secure payment of an amount borrowed, unless this has been provided for by special agreement.

Liability of Stockholders in most States is governed by statute.

WHEN A TRADE'S A TRADE

1. The Offer.—An offer, or proposal to do a thing, may be made either by words or signs, either orally or in writing, but in law it is not regarded as an offer until it comes to the knowledge of the person to whom it is made.

Offer by Mail.—In commercial transactions when an offer is made by mail, the general rule is that the offerer is entitled to an answer by return mail; but this will not apply

in all cases, for example, where there are several mails each day. In transactions which are not commercial, much less promptitude in answering is required.

When Revocable.—An offer which contains no stipulation

as to how long it shall continue is revocable at any time until accepted. When an offer is made for a time limited in the offer, no acceptance afterwards will make it binding.

2. **The Acceptance.**—An offer can only be accepted in the

terms in which it is made; an acceptance, therefore, which modifies the offer in any particular goes for nothing.

When the Trade's Complete.—The rule that a contract is complete at the instant when the minds of the parties meet is subject to modification where the negotiation is carried on by letter, for here it is impossible that both parties should have knowledge of the moment it becomes complete.

Where an Offer is Made by Letter, it is generally held that the mailing of a letter containing an acceptance of the offer completes the contract, although the letter containing the acceptance may be delayed or may not be received through fault of the mail.

Offers of Reward for the return of lost property, or for information leading to the arrest and conviction of offenders, become obligatory as soon as any one inspired to action by the offer complies with its terms. Where the offer is for information, the whole of which is furnished in fragments by different persons, the reward may be equitably proportioned; and so as to the recovery of property.

NAVIGATION LAWS

No vessel is deemed American and entitled to the protection of the American flag unless she is wholly built in this country and wholly owned and officered by Americans. Foreign vessels cannot engage in our coasting trade, which is held to include voyages from Atlantic to Pacific ports. American vessels cease to be such if even a part owner (except in a few instances) resides abroad for a short time. An American vessel once transferred by any process to foreigners, can never sail under our flag again. Duty must be paid on the value of all repairs which an American vessel make in foreign ports on her return to this country. Restrictions are placed on the repairing of foreign vessels in our ports with imported materials. Vessels engaged in trade to ports not in North or Central America, and a few specified adjacent places (except fishing and pleasure vessels), pay a tax on entry of six cents per ton of their burden, but the maximum aggregate tax in any one year does not exceed thirty cents. This is called a tonnage tax. Foreign vessels pay the same tax, but an American vessel is forced to pay

an additional tax of fifty cents per ton if one of her officers is an alien. Materials for the construction of vessels for foreign trade may be imported free of duty, but the duty must be paid if the vessel engages for more than two months a year in the coasting trade.

POINTS ON CRIMINAL LAW

Ignorance No Excuse.—Every person is presumed to know what the law is, and ignorance is no excuse for crime.

Arrests.—Any one without a warrant may arrest a person committing a felony in his presence, and any peace officer may arrest a person while committing a breach of the peace or immediately afterwards. Furthermore, a private citizen may arrest without a warrant if a felony has in fact been committed and if he has reasonable ground for believing that the person arrested is the guilty party. An officer is generally held to be justified in arresting without a warrant for a felony, if he has reasonable ground to believe that a felony has been committed and that the person arrested is the perpetrator, although it turns out that no felony has been committed.

The rule, "Every man's house is his castle," does not hold good in criminal cases, and an officer may break open doors of the criminal's house to execute a warrant; and he may do so without a warrant, as also may a private person, in fresh pursuit, under circumstances which authorize him to make an arrest.

Warrants.—No warrant shall be issued but upon probable cause, supported by oath, or affirmation.

Innocence Presumed.—Every one is presumed to be innocent until the contrary is proved.

Bound to Aid the Sheriff.—Every man is bound to obey the call of a sheriff for assistance in making an arrest.

An Accident is not a crime, unless criminal carelessness can be shown.

Arson is the malicious burning of another's house. In some States by statute it is an indictable offense to burn one's own house to defraud insurers.

"Settling" an Offense.—It is in many States an indictable

offense for the party immediately aggrieved to agree with a thief or other felon that he will not prosecute him, on condition that he return the stolen goods, or to take a reward not to prosecute.

Embezzlement is the wrongful appropriation of the money

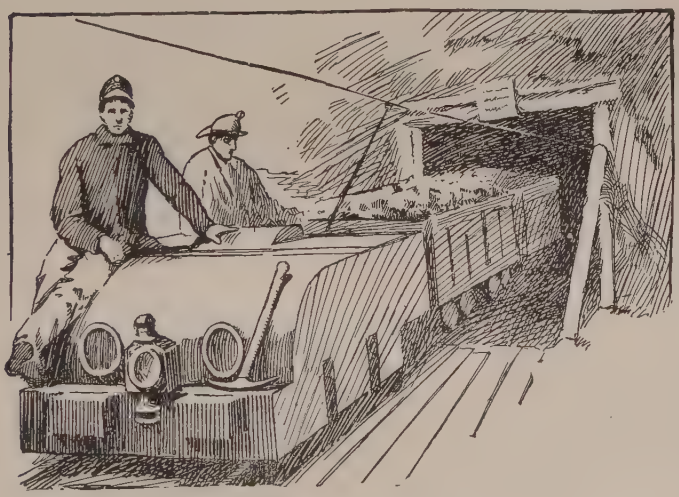
or goods of another by one entrusted therewith. It was not indictable at common law, but has been made a felony by various statutes. Public officers, bank cashiers, clerks, and others acting in a fiduciary capacity are peculiarly liable to be charged with this offense.

Drunkenness is not a legal excuse for crime, but sometimes is evidence of the absence of malice.

Self-Accusation.—No one ought to accuse himself except before God.

A Married Woman who commits a crime in the presence of her husband, unless it is of a very aggravated character, is in some States presumed to act by his coercion, and, unless the contrary is proved, she is not responsible. Under other circumstances she is liable, criminally, as if she were a single woman.

Insane Persons and others who are incapable of judging between right and wrong are usually absolved from criminal responsibility, though they may be liable civilly for damage done by their wrongful acts.



MINES AND MINING

Laws Governing.—The laws governing mines and mining vary in the different States, and a person intending to engage in the mining business should consult the statutes of the particular State in which he desires to operate.

HOW TO LOCATE A MINE

Who May Locate.—All valuable mineral deposits in lands belonging to the United States, whether surveyed or unsurveyed, are "free and open to exploration and purchase by citizens of the United States, or those who have declared their intention to become such."

Requisites of Location.—To stake off a claim so as to entitle a prospector to a patent requires considerable care. Unless the boundaries are given correctly, and the claim located strictly in accordance with the statutory provisions, the application for a patent will be refused.

For existing regulations governing the acquisition of mineral lands, the title to which is in the government, see Revised Statutes of the United States, Sections 2318-2352, and Supplement of Revised Statutes, pp. 166-67; 276, 324, 948, 950. An examination of these regulations is absolutely essential to the successful location of a claim, for it is not priority of discovery, but priority of compliance with the various requirements of the statutes that gives the right to the mine. As laws and regulations for the location, development and working of mines may be made by the different States, as well as by the general government, the statutes of the particular State where the mine is to be located should also be consulted.

LAWS GOVERNING PUBLIC ROADS

GENERAL PRINCIPLES

1. To prevent collisions, and to secure the safety and convenience of travelers meeting and passing each other upon the highway, a code of rules has been adopted which constitutes what is called the law of the road. These rules, originally established by custom, have, in many instances, been reënacted and declared by statute, and are of general and uniform observance in all parts of the United States. In general, they apply to private ways, as well as public roads, and, indeed, extend to all places appropriated, either by law or in fact, for the purposes of travel.

2. **Public Roads** are those which are laid out and supported by officers entrusted with that power. Their care and control is regulated by the statutes of the different States, and in detail will

not be referred to here, as they can be easily looked up by those who desire information so entirely local.

3. **Ownership.**—The soil and the land remain in the owner, who may put the land to any use, and derive from it any profit, not inconsistent with the rights of the public. If the road is at any time discontinued, the land reverts back to the owner.

4. **Liability.**—The repair of highways is usually imposed upon towns, and they are made liable by statute for all damages against persons or estates, from injuries received or happening in consequence of a neglect of duty on the part of the officers having the same in charge.

5. **The Primary** law of the road is that all persons using the same must exercise due care to prevent collisions and accidents. No one can claim damages for an injury mainly caused by his own negligence.

6. **Persons** traveling with carriages or vehicles of transportation, meeting on any public way, are required to turn their carriages or wagons to the right of the center of the road, so far as to permit such carriages or wagons to pass without interruption. Any unreasonable occupation of the public way, whether arising out of a refusal to turn out and allow a more rapid vehicle to pass, or from an unjustifiable occupancy of such a part of the road as to prevent others from passing, will render the party so trespassing liable for damages to any suffering injuries therefrom. A loaded vehicle must turn out, and allow those to pass who may reasonably and lawfully travel faster.

7. **Riders** are not governed by any fixed rules, but are required to use reasonable prudence at all times to prevent accidents. They need less room and can make quicker movements, and are, therefore, not under as well defined rules as vehicles.

8. **Pedestrians** have a right to use the carriage-way as well as the sidewalk, and drivers must exercise reasonable care to avoid injuring them, but a foot passenger in crossing the street of a city has no prior right of way over a passing vehicle; both are bound to act with prudence to avoid an accident, and it is as much the duty of the pedestrian to look out for passing vehicles as it is for the driver to see that he does not run over any one; nor does the rule requiring vehicles to keep to the right apply to carriages and foot passengers, for, as regards a foot passenger, a carriage may go on either side.

9. **Runaways.**—The owner of a runaway horse or horses, if negligent, or not exercising due care, is responsible for all damages that may occur. If a horse naturally quiet to ride and drive is frightened by a railroad train, steam thrasher or other causes not under the control of the rider or driver, and does any damage, or injures any person or persons, the owner is not responsible. If horses are known to be vicious, or sustain a runaway reputation, break loose or run away with their driver, or injure any person or persons, the owner is responsible, unless it can be shown that the horses were frightened by some obstacle which would naturally frighten a gentle or ordinarily quiet horse.

PETITION FOR LAYING OUT A ROAD

To the Commissioners of the Town of Plainfield, County of Will, State of Illinois.

Your petitioners, of the town of Plainfield, would respectfully represent that the public convenience and wants require that a road and highway should be laid out and constructed beginning at the northeast corner of George E. Smith's farm, in the town of Plainfield, and leading in a direct line south to the town of Lockport.

Your petitioners would therefore ask that your honors would view the premises and locate and construct said road and highway, according to the laws in such cases made and provided, as shown by the statutes of the State.

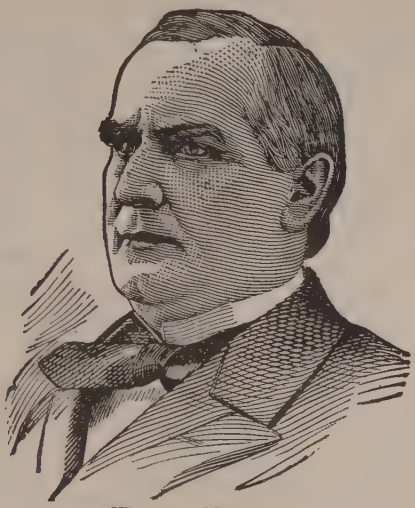
Signatures. *Signatures.*

PETITION FOR CHANGING A ROAD

To the Commissioners for the County of .....

The undersigned respectfully represent that the public road and highway from the house of J. H. Nolan, in the town of Oswego, passing the house of G. H. Faust, to the house of Charles Peterson, in the town of Oswego, is indirect, inconvenient and out of the way; wherefore, your petitioners request your honorable body to view the premises, straighten or new locate such road, and discontinue such parts of the present highway as may be useless, or make such alterations or improvements as shall appear to your honors necessary.

Signatures. *Signatures.*



WILLIAM MCKINLEY

PENSIONS

The Pension Bureau is the largest bureau of the government. It is presided over by the Commissioner of Pensions, who attends to all matters concerning pensions, and law affecting them; to their payment, and the detection and prosecution of attempts at fraud in claims for pensions.

Pension Agents are appointed by the President for four years, and give bonds and security for the faithful performance of their duties.

Rates Paid.—The highest rate of pension allowed by law is $100 a month, this being for the loss of both arms; the next highest is $72 per month, being for loss of both feet, or total disability requiring the regular aid and attendance of another person. These disabilities are called specific disabilities. The rates fixed by law for total disabilities, not specific, are as follows: *Army.*—Lieutenant-colonel and all officers of higher rank, $30; major, surgeon, and paymaster, $25; captain and chaplain, $20; first lieutenant and assistant surgeon, $17; second lieutenant and enrolling officer, $15; enlisted men, $8. *Navy* — Captain and all officers of higher rank, commander, surgeon, paymaster, and chief engineer, $30; lieutenant, passed assistant

surgeon, surgeon, paymaster, and chief engineer, $25; master, professor of mathematics, and assistant surgeon, $20; first assistant engineer, ensign, and pilot, $15; cadet midshipman, passed midshipman, midshipman, warrant officers, $10; enlisted men, $8.

How to Obtain a Pension.—To obtain a pension the applicant must file a claim with the Commissioner of Pensions, Washington, D. C. In a claim by the soldier he should set forth all his military or naval service, giving dates of enlistment and discharge. He should also set forth the name or nature of all disabilities for which pension is claimed, giving the time when, the place where and the circumstances under which each was contracted. The prime requirement to establish a claim under the act of July 14, 1862, usually termed the general law, is to show that the disability for which pension is claimed had its origin while in the service and line of duty; that it has existed as a disabling cause from date of discharge, and now exists in a degree pensionable under the law. In a claim under the act of June 27, 1890, the essential rquirements are: A service of ninety days or more, an honorable discharge therefrom and proof that the disability for which pension is claimed is not due to claimant's own vicious habits, but it need not necessarily be of service origin.

Widow's Claim.—In a widow's claim it is necessary to show her legal marriage to the soldier, the date of his death, and, under the general law, that it was due to some cause of service origin. She must also show that she has remained his widow. If there are children of the soldier under sixteen years of age at the date of his death, their names should be given and the date of birth of each clearly shown. If any have died, the date should be proved. In a widow's claim under the act of June 27, 1890, the requirement as to service is the same as under an invalid claim, and in addition thereto she must show a legal marriage to the soldier prior to the passage of the act, the fact of soldier's death (but it need not be shown to be due to service), her continued widowhood and that she is without other means of support than her daily labor. A minor child's title to pension accrues only on the death or remarriage of the widow, which fact must be shown, in addition to the requirements in widow's claim.

Dependent Mother.—A dependent mother must show her relationship to the soldier, his celibacy, that he contributed to

her support, that his death was due to some cause of service origin, the date of his death, and, under the general law, that she was dependent upon him at the date of his death. Under the act of June 27, 1890, it is only necessary to show dependence at date of filing claim and since then. A dependent father must show relationship by legal marriage to soldier's mother, the date of soldier's birth and of the mother's death, in addition to the requirements in the mother's claim.

ANARCHISTS NOT ELIGIBLE TO CITIZENSHIP

Excluding Anarchists.—The act of March 3, 1903 (taking effect June 1, 1903), imposed these further restrictions on the naturalization of aliens: No person who disbelieves in or who is opposed to all organized government, or who is a member of or affiliated with any organization entertaining and teaching such disbelief in or opposition to all organized government, or who advocates or teaches the duty, necessity, or propriety of the unlawful assaulting or killing of any officer or officers, either of specific individuals or of officers generally, of the government of the United States or of any other organized government, because of his or their official character, or who has violated any of the provisions of this act, shall be naturalized or be made a citizen of the United States.

Duty of Courts.—All courts and tribunals and all judges and officers thereof having jurisdiction of naturalization proceedings or duties to perform in regard thereto shall, on the final application for naturalization, make careful inquiry into such matters, and before issuing the final order or certificate of naturalization cause to be entered of record the affidavit of the applicant and of his witnesses so far as applicable, reciting and reaffirming the truth of every material fact requisite for naturalization. All final orders and certificates of naturalization hereafter made shall show on their face specifically that said affidavits were duly made and recorded, and all orders and certificates that fail to show such facts shall be null and void.

Penalty for Violation.—Any person who purposely procures naturalization in violation of the provisions of this section shall be fined not more than five thousand dollars, or shall be imprisoned not less than one nor more than ten years, or both, and the court in which such conviction is had shall thereupon adjudge and declare the order or decree and all certificates admitting such person to citizenship null and void. Jurisdiction is hereby conferred on the courts having jurisdiction of the trial of such offense to make such adjudication.

Any person who knowingly aids, advises or encourages any such person to apply for or to secure naturalization or to file the preliminary papers declaring an intent to become a citizen of the United States, or who in any naturalization proceeding knowingly procures or gives false testimony as to any material fact, or who knowingly makes an affidavit false as to any material fact required to be proved in such proceeding, shall be fined not more than five thousand dollars, or imprisoned not less than one nor more than ten years, or both.

Number of Pensioners on the Roll June 30, 1903

Location of Agency.	General Law.					Act of June 27, 1890.				Number of pensioners on roll June 30, 1903.	Number of pensioners on roll June 30, 1902.
	Army.			Navy.		Army.		Navy.			
	Invalids	Nurses	Widows, etc.	Invalids	Widows, etc.	Invalids	Widows, etc.	Invalids	Widows, etc.		
Topeka	27,395	66	6,691	...	...	60,850	17,397	...	...	115,629	115,855
Columbus	31,653	45	10,683	...	...	43,424	14,565	...	...	102,037	103,156
Chicago	20,600	57	6,786	869	349	31,040	10,510	3,704	1,007	76,947	77,203
Indianapolis	28,974	43	7,925	...	...	18,855	7,534	...	...	64,767	66,155
Knoxville	9,174	34	3,513	...	...	30,107	10,693	...	...	62,880	61,748
Philadelphia	10,439	33	4,821	550	324	27,574	13,487	2,008	1,146	61,393	63,437
Boston	11,611	47	6,055	982	548	21,029	11,824	3,300	1,681	58,044	57,626
Des Moines	17,909	50	4,048	...	...	25,258	6,501	...	...	54,880	55,037
New York	9,425	30	4,769	686	412	19,363	12,975	2,951	1,756	53,758	53,456
Washington	10,849	70	3,804	814	542	22,671	7,957	3,047	1,196	53,265	53,305
Milwaukee	16,170	27	4,244	...	...	22,907	6,349	...	...	50,675	50,808
Buffalo	14,753	21	6,085	...	...	19,466	7,256	...	...	48,239	47,242
Pittsburg	10,410	14	3,747	...	...	24,076	9,065	...	...	47,893	48,071
Detroit	15,793	15	4,346	...	...	17,033	5,291	...	...	43,331	43,820
San Francisco	7,719	54	1 567	241	46	19,606	4,336	1,000	206	38,051	36,735
Louisville	6,698	9	2,774	...	...	12,628	5,191	...	...	28,585	28,536
Augusta	7,505	5	2,470	...	...	6,305	2,110	...	...	18,597	18,649
Concord	7,062	4	2,543	...	...	5,519	2,208	...	...	17,574	17,807
Total	264,139	624	86,871	4,142	2,221	427,711	155,249	16,010	6,992	996,545	999,446
Inc. during year	....	....	...	...	...	1,523	7.048	57	15	...	...
Dec. during year	13,826	10	183	218	42	...	...	...	...	2,901	...

Pensioners of the war of the Revolution—Widows, 2; daughters, 3. Pensioners of the war of 1812—Survivor. 1; widows, 1,115. Pensioners of the war with Mexico—Survivors, 5,964; widows, 7,910. Indian wars—Survivors, 1,565; widows, 3,169. War with Spain—Invalids, 9,200; widows, 3,662.

PART X

Farms, Farming, Grain Tables, Land Measurement, etc.

J. WILSON
Famous Secretary of Agriculture Under President Roosevelt
A Typical American Farmer

FARMS AND FARMING

FARM STATISTICS

(CENSUS OF 1900)

The following agricultural statistics of the United States are for June 1, 1900:

Farms, total number	5,739,657
Farms with buildings	5,537,731
Acreage, total	841,201,546
Acreage, improved	414,793,191
Acreage, unimproved	426,408,355
Value of farm property	$20,514,001,838
Value of land and improvements	13,114,492,056
Value of buildings	3,660,198,191
Value of implements and machinery	761,261,550
Value of live stock	3,078,050,041
Value of products in 1899	4,739,118,752
Value of products fed to live stock in 1899	974,941,046
Value of products not fed to live stock in 1899	3,764,177,706
Expenditures in 1899 for labor	365,305,921
Expenditures in 1899 for fertilizers	54,783,757
Number of farms operated by owners	3,713,371
Number of farms operated by cash tenants	752,920
Number of farms operated by share tenants	1,273,366
Number of farms operated by white persons	4,970,129
Number of farms operated by negroes	746,717

Time of Planting, Quantity of Seed, Etc.

NEW ENGLAND

Kind of Crop.	Date of Planting.	Amount of Seed per acre.	Weeks to maturity.
Corn	May 10 to 30	8 to 12 qts	14-17
Wheat	Fall or Spring	2 bush.	20
Oats	April to May	2 to 3 bush.	11-15
Barley	April to June 20	....do	10-15
Rye	Apr. to May, Sept	5 to 6 pecks	40
Buckwheat	June 1 to 20	1 to 1½ bush.	10-15
White Beans	May to June	8 to 16 qts	8-14
Potatoes	April 15 to May 1	8 to 20 bush.	12-20
Turnips	July 1 to August 3	1 lb	10
Mangels	April 15 to May 5	4 to 6 lb.	17-22
Tobacco	Seed bed, April		9-12

MIDDLE STATES

Corn	April 20 to May 30	6 to 8 qts	16-18
Wheat	Sept. 20 to Oct. 20	2 bush.	41-43
Oats	March to May	2 to 2½ bush.	16-17
Barley	March to May	....do	13-16
Rye	Sept. 1 to Oct. 1	1½ bush.	40-43
Buckwheat	June to July	½ to 1½ bush.	8-10
White beans	May to June	1½ bush.	13-14
Potatoes	March to May	8 to 15 bush.	14-22
Sweet potatoes	May to June	10 to 12 bush.	10-15
Cabbage	March to July	4 to 8 oz.	8-15
Turnips	July	2 to 5 lbs	10-12
Mangels	May	10 to 15 bush.	15-18
Flax	May	20 qts	8-10
Tobacco	Seed bed, March		15-20
Hay, timothy	August to October	6 to 8 qts	
Hay, clover	February to April	6 qts	

CENTRAL AND WESTERN STATES

Corn	April 1 to June 1	6 qts	16-20
Wheat	Fall or Spring	2 bush.	40-42
Oats	April 1 to May 1	2 to 3 bush.	12-14
Barley	Fall or Spring	2 bush.	11-13
Rye	Sept. 1 to 30	1 to 2 bush.	35-40
Buckwheat	June	....do	10-12
White beans	May 10 to June 10	1½ bush.	12
Potatoes	March 15 to June 1	5 to 10 bush.	10-20
Turnips	July 15 to August 30	1 to 6 lb.	10-16
Mangels	April 1 to May 15	6 to 8 lb.	22-24
Flax	March 15 to May 15	2 to 3 pecks	15-20
Tobacco	Seed bed, March	Oz. to 6 Sq. rd	15-18
Hay	April to May	8 to 15 lb	

SOUTHERN STATES

Cotton	February to May 15	1 to 3 bush.	20-30
Corn	February to June	8 qts	18-20
Wheat	Sept. to Nov.	2 bush.	43
Oats	Feb., May, Sept	2½ bush.	17
Barley	April to May	....do	17
Rye	September to October	1½ bush.	43
White beans	March to May	1 to 2 bush.	7-8
Cabbage	Oct., March to May	½ to ¾ lb.	14
Water-melons	March 1 to May 10	2 to 7 lb	16-20
Onions	Feb. 1 to April 10		16-24
Potatoes	Jan., Feb. to April	8 to 10 bush.	11-15
Sweet potatoes	May to June	10 to 12 bush.	12-15
Pumpkins	April 1 to May 1	4 to 7 lb	17-20
Tomatoes	Jan. 1 to Feb. 19	4 to 9 oz.	14-20
Turnips	Feb., Aug., April	2 to 6 lb	8-12
Tobacco	Seed bed, March	Oz. to 6 sq. rd	18-20
Cow peas	May 1 to July 15	2 to 5 pecks	6-8

Relative Number of Plants or Hills in an Acre

Giving the number in an acre when the direct and cross rows are of equal or unequal width:

In.	10 in.	12 in.	15 in.	18 in.	20 in.	2 ft.	2½ft.	3 ft.	3½ft.	4 ft.	4½ft.	5 ft.
10	62726											
12	52272	43560										
15	41817	34848	27878									
18	34848	29040	23232	19360								
20	31362	26136	20908	17424	15681							
24	26132	21780	17424	14520	13068	10890						
30	20908	17424	13939	11616	10454	8712	6969					
36	17424	14520	11616	9680	8712	7260	5808	4840				
42	14935	12446	9953	8297	7467	6223	4976	4148	3565			
48	13068	10890	8712	7260	6534	5445	4356	3630	3111	2722		
54	11616	9680	7744	6453	5308	4840	3872	3226	2767	2420	2151	
60	10454	8712	6969	5808	5227	4356	3484	2004	2489	2178	1936	1742

Distance Traveled by a Horse in Plowing an Acre of Land

With the quantity of land worked, at the rate of 16 and 18 miles per day of 9 hours:

Width of furrow in inches.	Miles trav'd in plowing an acre.	Acres plowed per day.		Width of furrow in inches.	Miles trav'd in plowing an acre.	Acres plowed per day.	
		18 miles.	16 miles.			18 miles.	16 miles.
7	14 1–8	1 1–4	1 1–8	22	4 1–2	4	3 1–2
8	12 1–4	1 1–2	1 1–4	23	4 1–4	4 1–5	3 7–10
9	11	1 3–5	1 1–2	24	4	4 1–3	3 9–10
10	9 9–10	1 4–5	1 3–5	25	4	4 1–2	4
11	9	2	1 3–4	26	3 4–5	4 3–4	4 1–5
12	8 1–4	2 1–5	1 9–10	27	3 3–5	4 9–10	4 1–2
13	7 1–2	2 1–3	2 1–10	28	3 1–2	5 3–8	4 1–2
14	7	2 1–2	2 1 4	29	3 1–2	5 1–4	4 3–5
15	6 1–2	2 3–4	2 2 5	30	3 1–2	5 3–4	4 4–5
16	6 1–6	2 9–10	2 3–5	31	3 1–5	5	5
17	5 3–4	3 1–10	2 3–4	32	3 1–10	5 4–5	5 1–4
18	5 1–2	3 1–4	2 9–10	33	3	6	5 1–3
19	5 1–4	3 1–2	3 1–10	34	2 9–10	6 1–5	5 1–2
20	4 9–10	3 3–5	3 1–4	35	2 4–5	6 1–3	5 3–5
21	4 7–10	3 4–5	3 1–3	36	2 3–4	6 1–2	5 4–5

Measurement of Corn

In Cob.—Two heaping bushels of corn on the cob will make one struck bushel of shelled corn. Some claim that one and one-half bushels of ear will make one bushel of shelled corn. Much will depend upon the kind of corn, shape of the ear, size of the cob, etc.

In Crib.—To measure corn in a crib, multiply the length of the crib in inches by the width in inches, and that by the height of the corn in the crib in inches, and divide the product by 2,748, and the quotient will be the number of heaped bushels of ears. If the crib flares at the sides, measure the width at the

top and also at the bottom, add the two sums together, and divide by 2, which will give the mean width.

Capacity or Contents of a Granary, Bin, Crib or Wagon

Multiply the three dimensions—the length, width and depth—in feet (the inches, if any, being reduced to fractions of a foot), multiply the product by the decimal .803564, or deduct one-fifth, which is sufficiently exact for ordinary purposes, and the result is the number of bushels. Where the wagon or crib flares considerably in length or width, it will be necessary to obtain a mean dimension. This is done by taking the longest and shortest measures, with one or more intermediate ones, and dividing the sum of all by the number taken. The quotient will be the mean dimension sought. The greater the flare the larger the number of intermediate dimensions that should be taken to insure accuracy. Corn in the ear, when first cribbed, is estimated at twice the bulk of shelled corn.

Capacity of Corn-Cribs Ten Feet High

Breadth in Ft. / Lgth.	10	11	12	13	14	15	16	18	20	22	24	26	28	30
3	135	149	162	175	189	202	216	243	270	297	324	351	378	405
3½	158	173	189	205	221	236	258	284	315	347	378	410	451	473
4	180	198	216	234	252	270	288	324	360	396	432	468	504	540
4½	203	223	243	263	283	304	324	365	405	446	448	527	567	608
5	225	248	270	292	315	337	360	405	450	495	540	585	630	675
5½	248	272	297	322	347	371	396	446	495	545	594	644	693	743
6	270	297	324	351	378	405	432	486	540	594	648	702	756	810
6½	293	322	351	380	410	439	468	527	585	644	702	761	819	878
7	315	347	378	409	441	472	504	567	630	693	756	819	882	945
7½	338	371	405	439	473	506	540	608	675	743	810	878	945	1013
8	360	396	432	468	504	540	576	648	720	792	864	936	1008	1080
8½	383	421	459	497	536	574	612	689	765	842	918	995	1071	1148
9	405	446	486	526	567	607	648	729	810	891	972	1053	1134	1215
10	450	495	540	585	539	675	720	810	900	990	1080	1170	1260	1350
11	495	545	594	643	693	742	792	891	990	1089	1188	1287	1386	1485
12	540	594	648	702	756	810	864	972	1080	1188	1296	1404	1512	1620

Comparative Value of Good Hay and Other Food for Stock

100 lbs. hay are equal to		100 lbs. hay are equal to	
504 lbs.	turnips.	50 lbs.	oats.
300 "	carrots.	46 "	wheat.
201 "	uncooked potatoes.	54 "	rye.
175 "	boiled potatoes.	64 "	buckwheat.
339 "	mangel-wurzel.	57 "	Indian corn.
442 "	rye straw.	45 "	peas and beans.
360 "	wheat straw.	105 "	wheat bran.
180 "	barley straw.	109 "	rye bran.
150 "	pea straw.	167 "	wheat, pea and oat chaff.
200 "	buckwheat straw.	179 "	rye and barley mixed.
275 "	green Indian corn.	68 "	acorns.

Table Showing Amount of Hay or Its Equivalent Required Each Day for Every One Hundred Pounds an Animal Weighs

Working Horses	3.08 lbs.
Working Oxen	2.40 "
Fatting Oxen	5.00 "
Fatting Oxen, when fat	4.00 "
Milch Cows	from 2.25 to 2.40 "
Dry Cows	2.42 "
Young Growing Cattle	3.08 "
Steers	2.84 "
Pigs	3.00 "
Sheep	3.00 "

How to Tell the Age of Cattle

Age of Cattle.—A cow's horn is generally supposed to furnish a correct indication of the age of the animal. This is not always true. However, for ordinary purposes, the following will be found to be approximately correct. At two years of age a circle of thick matter begins to form on the animal's horns, which becomes clearly defined at three years of age, when another circle or ring begins to form, and so on year after year. Its age then can be determined by counting the number of rings and adding two to their number. The rings on the bull's horns do not show themselves until he is five years old, so to the number of rings we must add five to arrive at his age. Unless the rings are clear and distinct, this rule will not apply. Besides, dealers sometimes file off some of the rings of old cattle to make them appear younger.

Age of Sheep and Goats.—At one year old they have eight front teeth of uniform size. At two years of age the two middle ones are supplanted by two large ones. At three, a small tooth appears on each side. At four, there are six large teeth. At five, all the front teeth are large, and at six the whole begin to get large.

To Find the Weight of Live Stock by Measurement

The only instrument necessary is a measure with feet and inch marks upon it. The girth is the circumference of the animal just behind the shoulder blades. The length is the distance from the shoulder blades. The superficial feet are obtained by multiplying the girth and length. The following table contains the rule to ascertain the weight of the animal:

If less than one foot in girth, multiply superficial feet by eight.

If less than three and more than one, multiply superficial feet by eleven.

If less than five and more than three, multiply superficial feet by sixteen.

If less than seven and more than five, multiply superficial feet by twenty-three.

If less than nine and more than seven, multiply superficial feet by thirty-three.

If less than eleven and more than nine, multiply superficial feet by forty-two.

EXAMPLE: Suppose the girth of a bullock to be six feet three inches; length five feet six inches; the superficial area will then be thirty-four, and, in accordance with the preceding table, the weight will be seven hundred and eighty-two pounds.

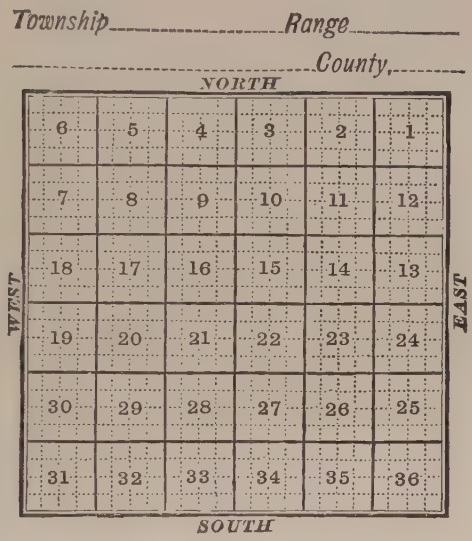
EXAMPLE: Suppose a pig to measure in girth two feet, and length one foot and nine inches. There would then be 3½ feet, which, multiplied by eleven, gives 38½ pounds as the weight of the animal when dressed. In this way, the weight of the four quarters can be substantially ascertained during life.

Measurement of Land

If the field be a square or parallelogram, multiply the length in rods by the width in rods, and divide by 160, the number of square rods in an acre. If the field is triangular, multiply the length of the longest side in rods by the greatest width in rods, and divide half the product by 160. If the field be of irregular shape, divide it into triangles, and find the acreage of each triangle as above. All straight-sided fields can be thus measured. Where the sides are crooked and irregular, take the length in rods in a number of places at equal distances apart, add them, and divide by the number of measurements, which will give the mean length; proceed similarly with the width, multiply the mean length by the mean width, and divide by 160. Where the field is in a circle, find the diameter in rods, multiply the square of the diameter by 7.854, and divide by 160.

To Lay Out an Acre in Rectangular Form.—An acre of land contains 160 square rods, or 43,560 square feet. Hence, to lay out an acre at right angles (square corners), when one side is known, divide the units in the square contents by the units of

the same kind in the length of the known side. Thus: if the known side be 4 rods, divide 160 by 4, and the quotient, 40, will be the depth of the acre-plot. If the length of the known side be 90 feet, divide 43,560 by 90, and the quotient, 48, will be the depth of an acre-plot.



Measurement of an Acre Plot

Either of the following measures include an acre plot:

3 by 53 1-8 rods.	7 by 22 6-7 rods.	10 by 16 rods.
4 by 40 "	8 by 20 "	11 by 14 6-11 "
5 by 32 "	9 by 17 7-8 "	12 by 13 1-3 "
6 by 26 2-3 "		

12 rods 10 feet and 8½ inches square make an acre.

Square Feet and Feet Square in Fractions of an Acre.

Fraction of an acre	Square feet.	Feet square.	Fraction of an acre.	Square feet.	Feet square.
1-16	2722½	52½	½	21780	147½
1-8	5445	73¾	1	43560	208¼
1-4	10890	104½	2	87120	295¼
1-3	14520	120½			

Amount of Barbed Wire Required for Fences

Estimated number of pounds of Barbed Wire required to fence space or distances mentioned, with one, two or three lines of wire, based upon each pound of wire measuring one rod (16½ feet).

	1 Line.	2 Lines.	3 Lines.
1 Square acre	50⅔ lbs.	101⅓ lbs.	152 lbs.
1 Side of a square acre	12⅔ lbs.	25⅓ lbs.	38 lbs.
1 Square half acre	36 lbs.	72 lbs.	108 lbs.
1 Square mile	1280 lbs.	2560 lbs.	3840 lbs.
1 Side of a square mile	320 lbs.	640 lbs.	960 lbs.
1 Rod in length	1 lbs.	2 lbs.	3 lbs.
100 Rods in length	100 lbs.	200 lbs.	300 lbs.
100 Feet in length	6 1-16 lbs.	12⅛ lbs.	18 3-16 lbs.

Minimum Weights of Produce

The following are minimum weights of certain articles of produce according to the laws of the United States:

	Per Bushel.
Wheat	60 lbs.
Corn, in the ear	70 "
Corn, shelled	56 "
Rye	56 "
Buckwheat	48 "
Barley	48 "
Oats	32 "
Peas	60 "
White Beans	60 "
Castor Beans	46 "
White Potatoes	60 "
Sweet Potatoes	55 "
Onions	57 "
Turnips	55 "

	Per Bushel.
Dried Peaches	33 lbs.
Dried Apples	26 "
Clover Seed	60 "
Flax Seed	56 "
Millet Seed	50 "
Hungarian Grass Seed	50 "
Timothy Seed	45 "
Blue Grass Seed	44 "
Hemp Seed	44 "
Salt (see note below)	
Corn Meal	48 "
Ground Peas	24 "
Malt	34 "
Bran	20 "

SALT.—Weight per bushel as adopted by different States ranges from 50 to 80 pounds. Coarse salt in Pennsylvania is reckoned at 80 pounds, and in Illinois at 50 pounds per bushel. Fine salt in Pennsylvania is reckoned at 62 pounds, in Kentucky and Illinois at 55 pounds per bushel.

Area and Weight of Tile

The following table shows the area and the weight of the different sized tile:

Size.	Weight.	Area.	Size.	Weight.	Area.
3 in.	5 lbs. ea.	8½ sq. in.	7 in.	15 lbs. ea.	41 sq. in.
3½ "	6 "	9½ "	8 "	18 "	53½ "
4 "	7 "	14 "	9 "	21 "	67 "
5 "	10 "	21½ "	10 "	24 "	80½ "
6 "	12 "	30½ "	12 "	28 "	113 "

The Carrying Capacity of Tile

GALLONS PER MINUTE

Size of Tile.	Fall per 100 Feet.						
	1 in.	3 in.	6 in.	9 in.	12 in.	24 in.	36 in.
3-inch	13	23	32	40	46	64	79
4-inch	27	47	66	81	93	131	163
6-inch	75	129	183	224	258	364	450
8-inch	153	265	375	460	529	750	923
9-inch	205	355	593	617	711	1006	1240
10-inch	267	463	655	803	926	1310	1613
12-inch	422	730	1033	1273	1468	2076	2551

A large tile will carry more water according to its size than a small one. This is because there is less surface on the inside of the large tile compared with the size of stream, and therefore less friction. More water will flow through a straight tile than a crooked one having the same diameter.

EXAMPLE: A nine-inch tile at 6 inches fall to the 100 feet will flow 593 gals. per minute.

How to Use the Hog and Cattle Table

CATTLE.

What will be the cost of 1,170 lbs. of cattle at $4.25 per hundredweight?

1,100 @ $4.25 = $46.75
70 @ 4.25 = 2.98

Answer—$49.73

HOGS.

What will be the cost of 2,750 lbs. of hogs at $3.75 per hundredweight?

2,700 @ $3.75 = $101.25
50 @ 3.75 = 1.88

Answer—$103.13

Hog and Cattle Table

The middle column gives the number of pounds and the top of each column the price per pound or hundred weight.

5c	10	2.50	2.75	3.00	3.25	Weight.	3.50	3.75	4.00	4.25	4.50
.00	.00	.08	.08	.09	.10	3	.11	.11	.12	.13	.14
.00	.01	.13	.14	.15	.16	5	.18	.19	.20	.21	.23
.01	.01	.25	.28	.30	.33	10	.35	.38	.40	.43	.45
.01	.02	.38	.41	.45	.49	15	.53	.56	.60	.64	.68
.01	.02	.50	.55	.60	.65	20	.70	.75	.80	.85	.90
.01	.03	.63	.69	.75	.81	25	.88	.94	1.00	1.06	1.13
.02	.03	.75	.83	.90	.98	30	1.05	1.13	1.20	1.28	1.35
.02	.04	.88	.96	1.05	1.14	35	1.23	1.31	1.40	1.49	1.58
.02	.04	1.00	1.10	1.20	1.30	40	1.40	1.50	1.60	1.70	1.80
.02	.05	1.13	1.24	1.35	1.46	45	1.58	1.69	1.80	1.91	2.03
.03	.05	1.25	1.38	1.50	1.63	50	1.75	1.88	2.00	2.13	2.25
.03	.06	1.38	1.51	1.65	1.79	55	1.93	2.06	2.20	2.34	2.48
.03	.06	1.50	1.65	1.80	1.95	60	2.10	2.25	2.40	2.55	2.70
.03	.07	1.63	1.79	1.95	2.11	65	2.28	2.44	2.60	2.76	2.93
.04	.07	1.75	1.93	2.10	2.28	70	2.45	2.63	2.80	2.98	3.15
.04	.08	1.88	2.06	2.25	2.44	75	2.63	2.81	3.00	3.19	3.38
.04	.08	2.00	2.20	2.40	2.60	80	2.80	3.00	3.20	3.40	3.60
.04	.09	2.13	2.34	2.55	2.76	85	2.98	3.19	3.40	3.61	3.83
.05	.09	2.25	2.48	2.70	2.92	90	3.15	3.38	3.60	3.83	4 05
.05	.10	2.38	2.61	2.85	3.08	95	3.33	3.56	3.80	4.04	4.28
.05	.10	2.50	2.75	3.00	3.25	100	3 50	3.75	4.00	4.25	4.50
.10	.20	5.00	5.50	6.00	6.50	200	7.00	7.50	8.00	8.50	9.00
.15	.30	7.50	8.25	9.00	9.75	300	10.50	11.25	12.00	12.75	13.50
.20	.40	10.00	11.00	12.00	13.00	400	14.00	15.00	16.00	17.00	18.00
.25	.50	12.50	13.75	15.00	16.25	500	17.50	18.75	20.00	21.25	22.50
.30	.60	15.00	16.50	18.00	19.50	600	21.00	22.50	24.00	25.50	27.00
.35	.70	17.50	19.25	21.00	22.75	700	24.50	26.25	28.00	29.75	31.50
.40	.80	20.00	22.00	24.00	26.00	800	28.00	30.00	32.00	34.00	36.00
.45	.90	22.50	24.75	27.00	29.25	900	31.50	33.75	36.00	38.25	40.50
.50	1.00	25.00	27.50	30.00	32.50	1000	35.00	37.50	40.00	42.50	45.00
.55	1.10	27.50	30.25	33.00	35.75	1100	38.50	41.25	44.00	46.75	49.50
.60	1.20	30.00	33.00	36.00	39.00	1200	42.00	45.00	48.00	51.00	54.00
.65	1.30	32.50	35.75	39.00	42.25	1300	45.50	48.75	52.00	55.25	58.50
.70	1.40	35.00	38.50	42.00	45.50	1400	49.00	52.50	56.00	59.50	63.00
.75	1.50	37.50	41.25	45.00	48.75	1500	52.50	56.25	60.00	63.75	67.50
.80	1.60	40.00	44.00	48.00	52.00	1600	56.00	60.00	64.00	68.00	72.00
.85	1.70	42.50	46.75	51.00	55.25	1700	59.50	63.75	68.00	72.25	76.50
.90	1.80	45.00	49.50	54.00	58.50	1800	63.00	67.50	72.00	76.50	81.00
.95	1.90	47.50	52.25	57.00	61.75	1900	66.50	71.25	76.00	80.75	85.50
1.00	2.00	50.00	55.00	60.00	65.00	2000	70.00	75.00	80.00	85.00	90.00
1.05	2.10	52.50	57.75	63.00	68.25	2100	73.50	78.75	84.00	89.25	94.50
1.10	2.20	55.00	60.50	66.00	71.50	2200	77.00	82.50	88.00	93.50	99.00
1.15	2.30	57.50	63.25	69.00	74.75	2300	80.50	86.25	92.00	97.75	103.50
1.20	2.40	60.00	66.00	72.00	78.00	2400	84.00	90.00	96.00	102.00	108.00
1.25	2.50	62.50	68.75	75.00	81.25	2500	87.50	93.75	100.00	106.25	112.50
1.30	2.60	65.00	71.50	78.00	84.50	2600	91.00	97.50	104.00	110.50	117.00
1.35	2.70	67.50	74.25	81.00	87.75	2700	94.50	101.25	108.00	114.75	121.50
1.40	2.80	70.00	77.00	84.00	91.00	2800	98.00	105.00	112.00	119.00	126.00
1.45	2.90	72.50	79.75	87.00	94.25	2900	101.50	108.75	116.00	123.25	130.50
1.50	3.00	75.00	82.50	90.00	97.50	3000	105.00	112.50	120.00	127.50	135.00
1.55	3.10	77.50	85.25	93.00	100.75	3100	108.50	116.25	124.00	131.75	139.50
1.60	3.20	80.00	88.00	96.00	104.00	3200	112.00	120.00	128.00	136.00	144 00
1.65	3.30	82.50	90.75	99.00	107.25	3300	115.50	123.75	132.00	140.25	148.50
1.70	3.40	85.00	93.50	102.00	110.50	3400	119.00	127.50	136.00	144.50	153.00
1.75	3.50	87.50	96.25	105.00	113.75	3500	122.50	131.25	140.00	148.75	157.50
1.80	3.60	90.00	99.00	108.00	117.00	3600	126.00	135.00	144.00	153.00	162.00
1.85	3.70	92.50	101.75	111.00	120.25	3700	129.50	138.75	148.00	157.25	166.50
1.90	3.80	95.00	104.50	114.00	123.50	3800	133.00	142.50	152.00	161.50	171.00
1.95	3.90	97.50	107.25	117.00	126.75	3900	136.50	146.25	156.00	165.75	175.50
2.00	4.00	100.00	110.00	120.00	130.00	4000	140.00	150.00	160.00	170.00	180.00
2.05	4.10	102.50	112.75	123.00	133.25	4100	143.50	153.75	164.00	174.25	184.50
2.10	4.20	105.00	115.50	126.00	136.50	4200	147.00	157.50	168.00	178.50	189.00
2.15	4.30	107.50	118.25	129.00	139.75	4300	150.50	161.25	172.00	182.75	193.50
2.20	4.40	110.00	121.00	132.00	143.00	4400	154.00	165.00	176.00	187.00	198.00
2.25	4.50	112.50	123.75	135.00	146.25	4500	157.50	168.75	180.00	191.25	202.50

How to Find the Number of Bushels of Grain in a Bin or Box

Rule.—Multipy the length in feet by the height in feet, and then again by the breadth in feet, and then again by 8, and cut off the right hand figure. The last result will be the number of bushels.

Example.—How many bushels in a bin 12 feet long, 8 feet wide and 4 feet high?

Solution.—12×8×4×8=307.2 bushels.—Answer.

To Find the Contents of a Wagon Box

A common wagon box is a little more than ten feet long and three feet wide, and will hold about two bushels for every inch in depth.

Rule.—Multiply the depth of the wagon box in inches by 2, and you have the number of bushels.

If the wagon box is 11 feet long multiply the depth in inches by 2, and add one-tenth of the number of bushels to itself.

Example.—How many bushels of grain will a wagon box hold, 20 inches deep and 10 feet long?

Solution.—20×2=40.—Answer.

N.B.—A bushel to the inch is calculated for corn on the cob.

Explanations of Grain Tables

The figures in heavy type represent the weight of the load, the number of bushels and pounds over are found at the right under the kind of grain.

Example.—How many bushels in a load of wheat weighing 1490 pounds? Run down the first, or weight column, to 1490 and find opposite under "wheat" 24 bushels and 50 pounds.

Table Showing the Number of Bushels and odd Pounds in a Load of Grain.

Weight	Oats. 32 Lbs.		Corn, Rye 56 Lbs.		Wheat. 60 Lbs.		Ear Corn 70 Lbs.		Ear Corn 75 Lbs.		Barley. 48 Lbs.	
	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs	Bus.	Lbs.	Bus.	Lbs.
1010	31	18	18	02	16	50	14	30	13	35	21	02
1020	31	28	18	12	17	00	14	40	13	45	21	12
1030	32	06	18	22	17	10	14	50	13	55	21	22
1040	32	16	18	32	17	20	14	60	13	65	21	32
1050	32	26	18	42	17	30	15	00	14	00	21	42
1060	33	04	18	52	17	40	15	10	14	10	22	04
1070	33	14	19	06	17	50	15	20	14	20	22	14
1080	33	24	19	16	18	00	15	30	14	30	22	24
1090	34	02	19	26	18	10	15	40	14	40	22	34
1100	34	12	19	36	18	20	15	50	14	50	22	44
1110	34	22	19	46	18	30	15	60	14	60	23	06
1120	35	00	20	00	18	40	16	00	14	70	23	16
1130	35	10	20	10	18	50	16	10	15	05	23	26
1140	35	20	20	20	19	00	16	20	15	15	23	36
1150	35	30	20	30	19	10	16	30	15	25	23	46
1160	36	08	20	40	19	20	16	40	15	35	24	08
1170	36	18	20	50	19	30	16	50	15	45	24	18
1180	36	28	21	04	19	40	16	60	15	55	24	28
1190	37	06	21	14	19	50	17	00	15	65	24	38
1200	37	16	21	24	20	00	17	10	16	00	25	00
1210	37	26	21	34	20	10	17	20	16	10	25	10
1220	38	04	21	44	20	20	17	30	16	20	25	20
1230	38	14	21	54	20	30	17	40	16	30	25	30
1240	38	24	22	08	20	40	17	50	16	40	25	40
1250	39	02	22	18	20	50	17	60	16	50	26	02
1260	39	12	22	28	21	00	18	00	16	60	26	12
1270	39	22	22	38	21	10	18	10	16	70	26	22
1280	40	00	22	48	21	20	18	20	17	05	26	32
1290	40	10	23	02	21	30	18	30	17	15	26	42
1300	40	20	23	12	21	40	18	40	17	25	27	04
1310	40	30	23	22	21	50	18	50	17	35	27	14
1320	41	08	23	32	22	00	18	60	17	45	27	24
1330	41	18	23	42	22	10	19	00	17	55	27	34
1340	41	28	23	52	22	20	19	10	17	65	27	44
1350	42	06	24	06	22	30	19	20	18	00	28	06
1360	42	16	24	16	22	40	19	30	18	10	28	16
1370	42	26	24	26	22	50	19	40	18	20	28	26
1380	43	04	24	36	23	00	19	50	18	30	28	36
1390	43	14	24	46	23	10	19	60	18	40	28	46
1400	43	24	25	00	23	20	20	00	18	50	29	08
1410	44	02	25	10	23	30	20	10	18	60	29	18
1420	44	12	25	20	23	40	20	20	18	70	29	28
1430	44	22	25	30	23	50	20	30	19	05	29	38
1440	45	00	25	40	24	00	20	40	19	15	30	00
1450	45	10	25	50	24	10	20	50	19	25	30	10
1460	45	20	26	04	24	20	20	60	19	35	30	20
1470	45	30	26	14	24	30	21	00	19	45	30	30
1480	46	08	26	24	24	40	21	10	19	55	30	40
1490	46	18	26	34	24	50	21	20	19	65	31	02
1500	46	28	26	44	25	00	21	30	20	00	31	12

Table Showing the Number of Bushels and odd Pounds in a Load of Grain—Continued.

Net Weight	Oats. 32 Lbs.		Corn, Rye 56 Lbs.		Wheat. 60 Lbs.		Ear Corn 70 Lbs.		Ear Corn 75 Lbs.		Barley. 48 Lbs.	
	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.
1510	47	06	26	54	25	10	21	40	20	10	31	22
1520	47	16	27	08	25	20	21	50	20	20	31	32
1530	47	26	27	18	25	30	21	60	20	30	31	42
1540	48	04	27	28	25	40	22	00	20	40	32	04
1550	48	14	27	38	25	50	22	10	20	50	32	14
1560	48	24	27	48	26	00	22	20	20	60	32	24
1570	49	02	28	02	26	10	22	30	20	70	32	34
1580	49	12	28	12	26	20	22	40	21	05	32	44
1590	49	22	28	22	26	30	22	50	21	15	33	06
1600	50	00	28	32	26	40	22	60	21	25	33	16
1610	50	10	28	42	26	50	23	00	21	35	33	26
1620	50	20	28	52	27	00	23	10	21	45	33	36
1630	50	30	29	06	27	10	23	20	21	55	33	46
1640	51	08	29	16	27	20	23	30	21	65	34	08
1650	51	18	29	26	27	30	23	40	22	00	34	18
1660	51	28	29	36	27	40	23	50	22	10	34	28
1670	52	06	29	46	27	50	23	60	22	20	34	38
1680	52	16	30	00	28	00	24	00	22	30	35	00
1690	52	26	30	10	28	10	24	10	22	40	35	10
1700	53	04	30	20	28	20	24	20	22	50	35	20
1710	53	14	30	30	28	30	24	30	22	60	35	30
1720	53	24	30	40	28	40	24	40	22	70	35	40
1730	54	02	30	50	28	50	24	50	23	05	36	02
1740	54	12	31	04	29	00	24	60	23	15	36	12
1750	54	22	31	14	29	10	25	00	23	25	36	22
1760	55	00	31	24	29	20	25	10	23	35	36	32
1770	55	10	31	34	29	30	25	20	23	45	36	42
1780	55	20	31	44	29	40	25	30	23	55	37	04
1790	55	30	31	54	29	50	25	40	23	65	37	14
1800	56	08	32	08	30	00	25	50	24	00	37	24
1810	56	18	32	18	30	10	25	60	24	10	37	34
1820	56	28	32	28	30	20	26	00	24	20	37	44
1830	57	06	32	38	30	30	26	10	24	30	38	06
1840	57	16	32	48	30	40	26	20	24	40	38	16
1850	57	26	33	02	30	50	26	30	24	50	38	26
1860	58	04	33	12	31	00	26	40	24	60	38	36
1870	58	14	33	22	31	10	26	50	24	70	38	46
1880	58	24	33	32	31	20	26	60	25	05	39	08
1890	59	02	33	42	31	30	27	00	25	15	39	18
1900	59	12	33	52	31	40	27	10	25	25	39	28
1910	59	22	34	06	31	50	27	20	25	35	39	38
1920	60	00	34	16	32	00	27	30	25	45	40	00
1930	60	10	34	26	32	10	27	40	25	55	40	10
1940	60	20	34	36	32	20	27	50	25	65	40	20
1950	60	30	34	46	32	30	27	60	26	00	40	30
1960	61	08	35	00	32	40	28	00	26	10	40	40
1970	61	18	35	10	32	50	28	10	26	20	41	02
1980	61	28	35	20	33	00	28	20	26	30	41	12
1990	62	06	35	30	33	10	28	30	26	40	41	22
2000	62	16	35	40	33	20	28	40	26	50	41	32

Table Showing the Number of Bushels and odd Pounds in a Load of Grain—Continued.

Net Weight	Oats. 32 Lbs.		Corn, Rye 56 Lbs.		Wheat. 60 Lbs.		Ear Corn 70 Lbs.		Ear Corn 75 Lbs.		Barley. 48 Lbs.	
	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.
2010	62	26	35	50	33	30	28	50	26	60	41	42
2020	63	04	36	04	33	40	28	60	26	70	42	04
2030	63	14	36	14	33	50	29	00	27	05	42	14
2040	63	24	36	24	34	00	29	10	27	15	42	24
2050	64	02	36	34	34	10	29	20	27	25	42	34
2060	64	12	36	44	34	20	29	30	27	35	42	44
2070	64	22	36	54	34	30	29	40	27	45	43	06
2080	65	00	37	08	34	40	29	50	27	55	43	16
2090	65	10	37	18	34	50	29	60	27	65	43	26
2100	65	20	37	28	35	00	30	00	28	00	43	36
2110	65	30	37	38	35	10	30	10	28	10	43	46
2120	66	08	37	48	35	20	30	20	28	20	44	08
2130	66	18	38	02	35	30	30	30	28	30	44	18
2140	66	28	38	12	35	40	30	40	28	40	44	28
2150	67	06	38	22	35	50	30	50	28	50	44	38
2160	67	16	38	32	36	00	30	60	28	60	45	00
2170	67	26	38	42	36	10	31	00	28	70	45	10
2180	68	04	38	52	36	20	31	10	29	05	45	20
2190	68	14	39	06	36	30	31	20	29	15	45	30
2200	68	24	39	16	36	40	31	30	29	25	45	40
2210	69	02	39	26	36	50	31	40	29	35	46	02
2220	69	12	39	36	37	00	31	50	29	45	46	12
2230	69	22	39	46	37	10	31	60	29	55	46	22
2240	70	00	40	00	37	20	32	00	29	65	46	32
2250	70	10	40	10	37	30	32	10	30	00	46	42
2260	70	20	40	20	37	40	32	20	30	10	47	04
2270	70	30	40	30	37	50	32	30	30	20	47	14
2280	71	08	40	40	38	00	32	40	30	30	47	24
2290	71	18	40	50	38	10	32	50	30	40	47	34
2300	71	28	41	04	38	20	32	60	30	50	47	44
2310	72	06	41	14	38	30	33	00	30	60	48	06
2320	72	16	41	24	38	40	33	10	30	70	48	16
2330	72	26	41	34	38	50	33	20	31	05	48	26
2340	73	04	41	44	39	00	33	30	31	15	48	36
2350	73	14	41	54	39	10	33	40	31	25	48	46
2360	73	24	42	08	39	20	33	50	31	35	49	08
2370	74	02	42	18	39	30	33	60	31	45	49	18
2380	74	12	42	28	39	40	34	00	31	55	49	28
2390	74	22	42	38	39	50	34	10	31	65	49	38
2400	75	00	42	48	40	00	34	20	32	00	50	00
2410	75	10	43	02	40	10	34	30	32	10	50	10
2420	75	20	43	12	40	20	34	40	32	20	50	20
2430	75	30	43	22	40	30	34	50	32	30	50	30
2440	76	08	43	32	40	40	34	60	32	40	50	40
2450	76	18	43	42	40	50	35	00	32	50	51	02
2460	76	28	43	52	41	00	35	10	32	60	51	12
2470	77	06	44	06	41	10	35	20	32	70	51	22
2480	77	16	44	16	41	20	35	30	33	05	51	32
2490	77	26	44	26	41	30	35	40	33	15	51	42
2500	78	04	44	36	41	40	35	50	33	25	52	04

Table Showing the Number of Bushels and odd Pounds in a Load of Grain—Continued.

Net Weight	Oats. 32 Lbs.		Corn, Rye 56 Lbs.		Wheat. 60 Lbs.		Ear Corn 70 Lbs.		Ear Corn 75 Lbs.		Barley. 48 Lbs.	
	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.
2510	78	14	44	46	41	50	35	60	33	35	52	14
2520	78	24	45	00	42	00	36	00	33	45	52	24
2530	79	02	45	10	42	10	36	10	33	55	52	34
2540	79	12	45	20	42	20	36	20	33	65	52	44
2550	79	22	45	30	42	30	36	30	34	00	53	06
2560	80	00	45	40	42	40	36	40	34	10	53	16
2570	80	10	45	50	42	50	36	50	34	20	53	26
2580	80	20	46	04	43	00	36	60	34	30	53	36
2590	80	30	46	14	43	10	37	00	34	40	53	46
2600	81	08	46	24	43	20	37	10	34	50	54	08
2610	81	18	46	34	43	30	37	20	34	60	54	18
2620	81	28	46	44	43	40	37	30	34	70	54	28
2630	82	06	46	54	43	50	37	40	35	05	54	38
2640	82	16	47	08	44	00	37	50	35	15	55	00
2650	82	26	47	18	44	10	37	60	35	25	55	10
2660	83	04	47	28	44	20	38	00	35	35	55	20
2670	83	14	47	38	44	30	38	10	35	45	55	30
2680	83	24	47	48	44	40	38	20	35	55	55	40
2690	84	02	48	02	44	50	38	30	35	65	56	02
2700	84	12	48	12	45	00	38	40	36	00	56	12
2710	84	22	48	22	45	10	38	50	36	10	56	22
2720	85	00	48	32	45	20	38	60	36	20	56	32
2730	85	10	48	42	45	30	39	00	36	30	56	42
2740	85	20	48	52	45	40	39	10	36	40	57	04
2750	85	30	49	06	45	50	39	20	36	50	57	14
2760	86	08	49	16	46	00	39	30	36	60	57	24
2770	86	18	49	26	46	10	39	40	36	70	57	34
2780	86	28	49	36	46	20	39	50	37	05	57	44
2790	87	06	49	46	46	30	39	60	37	15	58	06
2800	87	16	50	00	46	40	40	00	37	25	58	16
2810	87	26	50	10	46	50	40	10	37	35	58	26
2820	88	04	50	20	47	00	40	20	37	45	58	36
2830	88	14	50	30	47	10	40	30	37	55	58	46
2840	88	24	50	40	47	20	40	40	37	65	59	08
2850	89	02	50	50	47	30	40	50	38	00	59	18
2860	89	12	51	04	47	40	40	60	38	10	59	28
2870	89	22	51	14	47	50	41	00	38	20	59	38
2880	90	00	51	24	48	00	41	10	38	30	60	00
2890	90	10	51	34	48	10	41	20	38	40	60	10
2900	90	20	51	44	48	20	41	30	38	50	60	20
2910	90	30	51	54	48	30	41	40	38	60	60	30
2920	91	08	52	08	48	40	41	50	38	70	60	40
2930	91	18	52	18	48	50	41	60	39	05	61	02
2940	91	28	52	28	49	00	42	00	39	15	61	12
2950	92	06	52	38	49	10	42	10	39	25	61	22
2960	92	16	52	48	49	20	42	20	39	35	61	32
2970	92	26	53	02	49	30	42	30	39	45	61	42
2980	93	04	53	12	49	40	42	40	39	55	62	04
2990	93	14	53	22	49	50	42	50	39	65	62	14
3000	93	24	53	32	50	00	42	60	40	00	62	24

Table Showing the Number of Bushels and odd Pounds in a Load of Grain—Continued.

Pounds.	Oats. 32 Lbs.		Corn, Rye 56 Lbs.		Wheat. 60 Lbs.		Ear Corn 70 Lbs.		Ear Corn 75 Lbs.		Barley. 48 Lbs.	
	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.
3010	94	02	53	42	50	10	43	00	40	10	62	34
3020	94	12	53	52	50	20	43	10	40	20	62	44
3030	94	22	54	06	50	30	43	20	40	30	63	06
3040	95	00	54	16	50	40	43	30	40	40	63	16
3050	95	10	54	26	50	50	43	40	40	50	63	26
3060	95	20	54	36	51	00	43	50	40	60	63	36
3070	95	30	54	46	51	10	43	60	40	70	63	46
3080	96	08	55	00	51	20	44	00	41	05	64	08
3090	96	18	55	10	51	30	44	10	41	15	64	18
3100	96	28	55	20	51	40	44	20	41	25	64	28
3110	97	06	55	30	51	50	44	30	41	35	64	38
3120	97	16	55	40	52	00	44	40	41	45	65	00
3130	97	26	55	50	52	10	44	50	41	55	65	10
3140	98	04	56	04	52	20	44	60	41	65	65	20
3150	98	14	56	14	52	30	45	00	42	00	65	30
3160	98	24	56	24	52	40	45	10	42	10	65	40
3170	99	02	56	34	52	50	45	20	42	20	66	02
3180	99	12	56	44	53	00	45	30	42	30	66	12
3190	99	22	56	54	53	10	45	40	42	40	66	22
3200	100	00	57	08	53	20	45	50	42	50	66	32
3210	100	10	57	18	53	30	45	60	42	60	66	42
3220	100	20	57	28	53	40	46	00	42	70	67	04
3230	100	30	57	38	53	50	46	10	43	05	67	14
3240	101	08	57	48	54	00	46	20	43	15	67	24
3250	101	18	58	02	54	10	46	30	43	25	67	34
3260	101	28	58	12	54	20	46	40	43	35	67	44
3270	102	06	58	22	54	30	46	50	43	45	68	06
3280	02	16	58	32	54	40	46	60	43	55	68	16
3290	102	26	58	42	54	50	47	00	43	65	68	26
3300	103	04	58	52	55	00	47	10	44	00	68	36
3310	103	14	59	06	55	10	47	20	44	10	68	46
3320	103	24	59	16	55	20	47	30	44	20	69	08
3330	104	02	59	26	55	30	47	40	44	30	69	18
3340	104	12	59	36	55	40	47	50	44	40	69	28
3350	104	22	59	46	55	50	47	60	44	50	69	38
3360	105	00	60	00	56	00	48	00	44	60	70	00
3370	105	10	60	10	56	10	48	10	44	70	70	10
3380	105	20	60	20	56	20	48	20	45	05	70	20
3390	105	30	60	30	56	30	48	30	45	15	70	30
3400	106	08	60	40	56	40	48	40	45	25	70	40
3410	106	18	60	50	56	50	48	50	45	35	71	02
3420	106	28	61	04	57	00	48	60	45	45	71	12
3430	107	06	61	14	57	10	49	00	45	55	71	22
3440	107	16	61	24	57	20	49	10	45	65	71	32
3450	107	26	61	34	57	30	49	20	46	00	71	42
3460	108	04	61	44	57	40	49	30	46	10	72	04
3470	108	14	61	54	57	50	49	40	46	20	72	14
3480	108	24	62	08	58	00	49	50	46	30	72	24
3490	109	02	62	18	58	10	49	60	46	40	72	34
3500	109	12	62	28	58	20	50	00	46	50	72	44

FARMER'S CLUB

In a farmer's club, which has for its object social intercourse and the acquisition of knowledge, there need be few arbitrary rules of order enforced, but, instead, the discussions may be more or less conversational. But, as all business is facilitated by good regulations, the officers of the club ought to be armed with by-laws, and empowered to enforce their provisions whenever necessary.

Constitution

ART. 1.—This association shall be known as the Castana Farmer's Club. Its object shall be to promote a knowledge of practical Farming and Gardening among its members and the community, in connection with social enjoyments by the members and their families.

ART. 2.—The members of the club are those who frame this constitution and conform to its requirements, and others who may be invited to join by the executive committee, all of whom shall pay $00—annually in September (or monthly) into the treasury.

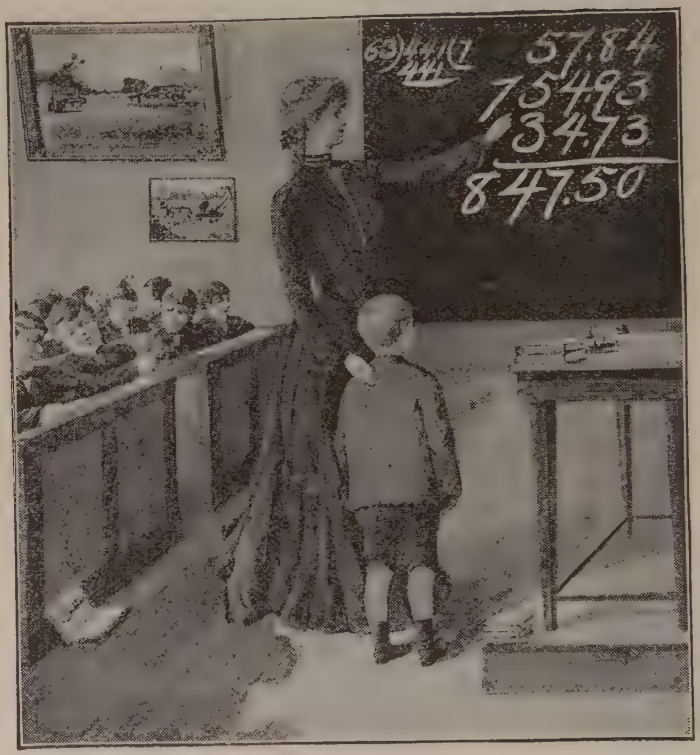
ART. 3.—The officers of the Club shall be a President, a Secretary, who shall be the Treasurer, and three members, who, with the President and Secretary, shall constitute the Executive Committee. The Secretary shall keep records of transactions, and be custodian of the funds and other property of the Club, being accountable at all times to the Executive Committee, giving bonds, if required, and shall prepare and present a full report to the Club at the annual meeting. The Executive Committee, three members of which shall be a quorum, shall have general charge of the interests of the Club and the carrying out of its objects. It shall fill vacancies among its officers, make rules, invite new members to join, regulate expenditures, manage exhibitions or fairs, publish offers of prizes and the awards, be responsible for the welfare of the Club, and report at the annual meeting through its Clerk.

ART. 4.—The meeting of the Club shall take place on the first Tuesday of each month; the meeting in January being known as the "Annual Meeting."

ART. 5.—This Constitution may be amended by a vote of two-thirds of the members present at any regular meeting, notice having been given at the preceding regular meeting.

TEACH BUSINESS WAYS TO WIVES AND DAUGHTERS

Every business man who has a wife and daughters should instruct them in the essential principles of business, so that if illness should prevent him for a time from giving active attention to his affairs, they may convey to him accurate knowledge



TEACHING CHILDREN BUSINESS

of the condition of his business, or, in case of his death, may aid in the proper settlement of his estate.

Wives and daughters of business men should seek to acquaint themselves with the laws and conduct of actual business, and become familiar with the forms used in the transaction of com-

mercial affairs. Even if they are not called upon to take actual charge of business matters, still this knowledge will be of service, as it will enable them to give valuable aid and helpful counsel to husband or father.

And let no man think lightly of the opinion of his wife in times of difficulty. Women generally have more acuteness of perception than men; and in moments of peril, or in circumstances that involve a crisis or turning-point in life, they have usually more resolution and greater instinctive judgment.

HOW TO TEACH BUSINESS TO CHILDREN

Children will learn with pleasure from the lips of parents what they think drudgery to learn from books. This fact should be taken early advantage of to familiarize sons and daughters with business customs, and to induce them to form business habits.

Let them learn from experience how money is earned by industry and saved by economy.

That they may form a habit of doing business systematically, procure for them a little account book, and have them keep an itemized account of all money received and paid out. This should show how each sum entered was earned, and how each sum paid out was expended. This habit, once acquired, will become a second nature and remain with them for life.

System is absolutely essential to business success, and parents should see to it that their children do things systematically. "Successful men," says Carlyle, "possess the great gift of a methodical, well-balanced, arranging mind; they are men who cannot work in disorder, but will have things straight, and know all the details, which enables them so to arrange the machinery of their affairs, that they are fully cognizant alike of its strength, weakness, and capacity, and they judiciously and discreetly exercise all its power to the uttermost."

WHEN NAME SHOULD BE SIGNED IN FULL

Persons should always sign their full name to deeds, mortgages, notes, and receipts; for, although one Christian name only is recognized in law, yet the writing out in full of one's "middle" name, as well as the first name, tends to prevent the

name being mistaken for that of some other individual having similar initials. For instance, instead of John A. Jones, write John Albert Jones.

HOW A MARRIED WOMAN SHOULD SIGN HER NAME

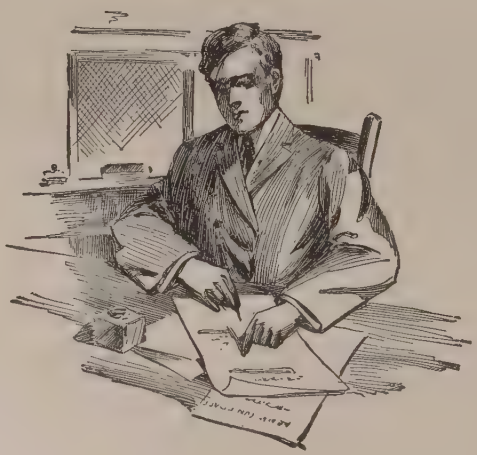
A married woman should sign her own Christian name, instead of that of her husband, to legal and business documents. For example, Mrs. Smith should sign Mary Ellen Smith, instead of Mrs. John Smith.

HOW SIGNATURE OF PERSON WHO CANNOT WRITE SHOULD BE SIGNED

When a person who cannot write is required to sign a document, it should be done by having him make his mark. The signature should always be witnessed. Example:

his
Henry × Yates.
mark

Witness: William Henson.



PART XI

Money, Postal Information, Salesmanship, Shipping, etc.

THEODORE ROOSEVELT
A Typical American
Soldier Statesman President

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MONEY

Money, or the medium of exchange, in the United States consists of gold, silver, nickel and composition coins, and the paper money issued by the government and the national banks.

COINS OF THE UNITED STATES

The following tables show the denominations, weight, and fineness of the coins of this country.

Gold

Denominations.	Fine Gold Contained.	Alloy Contained.*	Weight.
	Grains.	Grains.	Grains.
One dollar ($1)	23.22	2.58	25.80
Quarter eagle ($2.50)	58.05	6.45	64.50
Three dollars ($3)	69.66	7.74	77.40
Half eagle ($5)	116.10	12.90	129.00
Eagle ($10)	232.20	25.80	258.00
Double eagle ($20)	464.40	51.60	516.00

*The alloy neither adds to nor detracts from the value of the coin.

Silver

Denominations.	Fine Silver Contained.	Alloy Contained.	Weight.
	Grains.	Grains.	Grains.
Standard dollar	371.25	41.25	412.50
Half dollar	173.61	19.29	192.90
Quarter dollar	86.805	9.645	96.45
Dime	34.722	3.858	38.58

Prior to the Act of February 21, 1853, all silver coins were legal tender in all payments whatsoever. The Act of February 21, 1853, reduced the weight of all silver coins of less denomination than the silver dollar about 7 per cent, to be coined on gov-

ernment account only, and made them legal tender in payment of debts for all sums not exceeding five dollars. No foreign coins are legal tender in the United States.

Minor

Denominations.	Fine Copper Contained.	Alloy Contained.	Weight.
	Grains.	Grains.	Grains.
Five cents*.	57.87	19.29	77.16
One cent†.	45.60	2.40	48.00

* Seventy-five per cent copper, 25 per cent nickel.
† Ninety-five per cent copper, 5 per cent tin and zinc.

Troy weights are used, and, while metric weights are by law assigned to the half and quarter dollar and dime, troy weights will continue to be employed, 15.432 grains being considered as the equivalent of a gram, agreeably to the Act of July 28, 1866.

The weight of $1,000 in United States gold coin is 53.75 troy ounces, equivalent to 3.68 pounds avoirdupois. The weight of $1,000 in standard silver dollars is 859.375 troy ounces, equivalent to 58.92 pounds avoirdupois, and the weight of $1,000 in subsidiary silver is 803.75 troy ounces, equivalent to 55.11 pounds avoirdupois.

Where Coins Are Made

The coins of the United States are made at the mint in Philadelphia, and at the branch mints in New Orleans, San Francisco, Carson City, and Denver. Those coined in Philadelphia have no mint mark on them, but those coined in New Orleans have an O on the reverse side, below the eagle; those coined at San Francisco an S; those coined at Carson City, CC; and those coined at Denver a D.

Total Number and Value of United States Coins

The total number of gold pieces coined at the mints of the United States from their organization, 1792, to June 30, 1902, was 206,517,774, of a total value of $2,328,134,400.50; total number of silver coins, 1,736,628,993, of a total value of $861,553,027.50; total number of minor coins, 2,019,854,160, of a total value of $37,943,273.97; total number of coins of all kinds, 3,963,000,927, of a total value of $3,227,630,701.97.

Legal Tender Value of Coins

Legal tender is a term used to designate money which may be lawfully used in the payment of debts.

Gold Coin is legal tender at its nominal or face value for all debts, public and private, when not below the standard weight and tolerance prescribed by law; and when below such standard and legal tolerance it is legal tender in proportion to its weight.

The Standard Silver Dollar is legal tender for all debts, public and private, without regard to the amount, except where otherwise expressly stipulated in the contract.

The Trade Dollar, a silver piece no longer coined, is not legal tender for any amount; nor is any of the commemorative coinage, such as the Columbian Exposition issue.

The Subsidiary Silver Coins, half dollars, quarters and dimes, are legal tender in sums not exceeding ten dollars, in payment of all public and private debts.

Minor Coins, all coins of the United States of smaller denomination than dimes, are legal tender for single payments not exceeding twenty-five cents.

PAPER MONEY OF THE UNITED STATES

The paper money of this country consists of four kinds: first, legal tender notes, which are divided into United States notes and Treasury notes; second, national bank notes; third, gold certificates; fourth, silver certificates.

The Legal Tender Notes of the United States are bills issued merely on the credit of the government. The acts of 1875 and 1882, however, direct the Treasurer of the United States to hold $100,000,000 as a reserve for their redemption.

The National Bank Notes are issued by the national banks and guaranteed by the government, the banks depositing United States bonds as security.

Gold and Silver Certificates are issued by the government against deposits of gold and silver coin, and are exchangeable for the coin on demand. The Treasury holds the coin so deposited as a trust fund. The certificates represent the coin and are used in preference to it merely because of greater convenience in handling.

Legal Tender Value of Paper Money

United States Notes are legal tender for all debts, public and private, except duties on imports and interest on the public debt.

Treasury Notes issued under the act of July 14, 1890, are legal tender for all debts, public and private, except where otherwise expressly stipulated in the contract.

Gold and Silver Certificates are not legal tender, but are receivable for customs and all public dues.

National Bank Notes are not legal tender, but are receivable for all public dues except duties on imports, and may be paid out by the government for all salaries and other debts and demands owing by the United States to individuals, corporations and associations within the United States, except interest on the public debt and in redemption of the United States notes and Treasury notes.

AMOUNT OF MONEY IN CIRCULATION

A statement issued by the Treasury Department shows the various kinds and amounts of money in circulation Oct. 1, 1905, to be as follows:

Gold coin	$652,330,135
Standard silver dollars	79,436,901
Subsidiary silver	105,539,966
United States notes	336,338,926
Treasury notes, 1890	8,764,858
Gold certificates	471,595,979
Silver certificates	469,973,307
National bank notes	500,250,319
Total	$2,624,230,391

This would give about thirty-two dollars to every man, woman and child in the country.

HOW TO SEND MONEY

There are various methods in vogue for sending money. The choice between them is largely a matter of circumstance and convenience.

Bank Drafts.—A draft on some reliable bank is by far the best and most business-like way to send large amounts of money. It is safe, convenient and cheap.

Postoffice Order.—By postoffice order is also a safe and reliable way to send money. It costs a little more than to remit by

draft, but it is equally secure, and many times more convenient, because the postoffice is accessible at all hours of the day.

Registered Letters.—The government promises special care in handling and transmitting a registered letter or package, but is liable not to exceed twenty-five ($25) dollars in case the letter or package is lost. This applies only to first-class registered matter.

Express Orders.—The express order, as to security, has all the advantages of the bank draft or postoffice order. Serious disadvantages often arise, however, when the express office on which the order is drawn has not the money on hand to pay it, consequently the holder of the order has to wait the slow action of the company's agents in getting the amount forwarded from some other office.

HOW MONEY IS SENT BY TELEGRAPH

Telegraph offices are supplied with blanks for sending money, and to know just how it is done might be no small relief in an emergency. If by any accident one finds himself far from home and moneyless he can telegraph for money and get a remittance at once. The friend to whom the telegram is sent should take the precaution to satisfy himself that the message is from the person whose name is attached to it. He then takes his money to the telegraph office and makes out the following blank:

No.....

Chicago, Ill.....1904.

The Western Union Telegraph Company.

Pay to.....

..... Dollars

for me, subject to the foregoing terms and conditions, which are agreed to .

(Signature).....

(Address).....

Amount of Transfer, $.....

Telegraph Service.....

Other Service.....

Total ..... $.....

June 10, 1904.

As the within named..... .....may not be able to produce proper evidence of personal identity, I hereby authorize and direct The Western Union Telegraph Co. to pay within named sum of.....dollars, at my risk, to such person calling for the same as the proper office manager or agent of said company shall believe to be said.....

(Signature).....

Charges of 1 per cent are made on all sums of $25 or over, and for smaller amounts 25 cents in each case.

WHAT TO DO WITH MUTILATED OR WORN-OUT MONEY

The Treasury laws of the United States provide that any one who owns a worn-out, mutilated, or very dirty government note can have a newly printed one therefor by simply presenting the old note at the Treasury building at Washington, either in person or by mail.

The old bills handed in to the department, though still good enough to pass for their face value anywhere, are always destroyed. It is estimated that the old bills sent in to the department for redemption amount to the enormous total of 300,000 bills per day, and their total value to over a million dollars.

Although many private individuals have old bills redeemed at the Treasury, the very great majority of the old bills sent in to be exchanged for new ones are received from banking houses in different parts of the country. Every time any banks come across dilapidated bills they put them aside, and when a few hundred have accumulated they are bundled up carefully and sent to the Treasury by registered letter or express. In each instance the amount of money contained must be plainly marked on the wrapper

As might well be expected, there are many unscrupulous people who in sending in a bundle of old bills are so dishonest as to mark the contained amount at a figure higher than it really is. Other dishonest people insert one or two counterfeit notes in the midst of their bundle of good ones. In each case, however, these would-be criminals fail in their purpose and are put to a great deal of annoyance besides.

As each bundle of bills comes in, it is counted in the presence of the person delivering it, the number of bills of each denomination in each package being carefully checked off by both the outsider and the Treasury clerk. If the count is satisfactory to both, the parcel is again tied up, secured with the Treasurer's seal, and the messenger goes away with a receipt. Otherwise the whole batch is returned to the sender, who must stand the responsibility if any of the money is lost in going back.

Redemption of Fractional Silver Coins

1. The holder of any of the silver coins of the United States of smaller denominations than one dollar may, on presentation of the same in sums of twenty dollars, or any multiple thereof, at

the office of the Treasurer or any Assistant Treasurer of the United States, receive therefor lawful money of the United States.

2. The coins for exchange should be put up by denominations, and each package marked with the amount it contains.

3. No coins mutilated so as to be unfit for circulation will be received.

4. When the coins are forwarded to the Treasury by express, they should be addressed to the Treasurer U. S., Washington, D. C.

ISSUE AND REDEMPTION OF MINOR COINS

Issue of Minor Coins

1. The minor coins of the United States of the denominations of one cent, three cents, and five cents, are issued and forwarded free of expense, upon application to the Superintendent of the Mint at Philadelphia, for lawful money of the United States in sums of twenty dollars, or multiples thereof. Remittances may be made by postoffice money orders or sight drafts to the order of said superintendent, payable in New York or Philadelphia.

2. The Treasurer and Assistant Treasurers are authorized to pay out, for United States notes, any minor coins not needed in the current business of their offices.

Redemption of Minor Coins

1. Coins of copper, bronze, and copper nickel may be presented in sums of twenty dollars, or multiples thereof, assorted by denominations and issues, at the mint in Philadelphia, or to the Treasurer or any Assistant Treasurer, for redemption in lawful money.

2. A letter of advice should accompany the package, stating the amount and kind of coins, and the name of the owner.

3. Mutilated minor coins will not be redeemed or exchanged.

COUNTERFEIT MONEY

A *counterfeit* bank note is a *fac-simile* of the genuine, or as nearly like it as it is possible to make it. A *spurious* note is one whose designs are different from the genuine, and is intended to pass in places where the genuine is unknown. An *altered* note is one that is altered from a lower to a higher

denomination; or on a broken or bogus bank, having the name or locality changed for that of some reputable bank. A *cut* note is one made from pieces cut from a number of good bills. A little strip is cut from one genuine note, a little larger strip from another, and the strip cut from the first is placed in the place of it, and so on, until, by skillful cutting, one extra bill out of about every ten is made.

Rules for Detecting Counterfeit Coins

Gold.—A spurious gold coin may sometimes be detected by the dull sound it makes when thrown upon the counter. Its size and weight serve as an additional test, a spurious gold coin

THIS FIVE HUNDRED DOLLAR BILL IS COMPOSED OF SIXTEEN PIECES CUT FROM GENUINE NOTES, AND WAS SENT TO THE UNITED STATES TREASURER FOR REDEMPTION BY A NEW YORK BANK CLERK

usually being made larger than a genuine coin of the same denomination in order to give it the necessary weight. The milling or edge-work usually is imperfect, owing to the fact that the counterfeit coin is generally cast in a mold, while the genuine coin is stamped and cut with a die. All counterfeit coins have a *greasy* feel when rubbed between the fingers and thumb. But the most dangerous counterfeit gold coins are made from a die, and sometimes can only be detected by the acid test. Strong nitric acid, 6½ drachms; muriatic acid, ¼ drachms; water, 5 drachms, constitute the acid mixture necessary for the test. If the edge of a coin be scratched with a knife and exposed to a drop of this mixture, the color will change instantly if the coin is counterfeit, and if the coin is genuine the acid will have no effect upon it.

Genuine gold coins of large denominations are frequently debased by processes known as *sweating, plugging,* and *filling.* Sweating is done by means of abrasion, filing, or an acid bath. Plugging is done by boring a hole in the coin and filling the place with some base metal, which is then plated over with gold. Filling is done by sawing or splitting the coin into two thin pieces, removing the interior, filling in with base metal, joining the pieces together again, and then remilling and plating the edges.

Silver.—Most counterfeit silver coins are made from Babbitt metal, and are almost always molded. Glass is sometimes mixed with the metal to give the coins a ringing sound. This often makes them so brittle that they are shattered when thrown upon the counter. Their imperfect edges and greasy feel usually reveal them to be counterfeit. When they are made from a die, however, and antimony and lead are used in their composition, the acid test is generally required to detect their true character.

Five-Cent Pieces (nickels) have been extensively counterfeited, but usually are easily detected, being made of pewter or some other soft composition.

How to Detect Counterfeit Bills

1. Counterfeiters rarely, if ever, get the imprint or engraver's name perfect. The shading in the background of the vignette and over and around the letters forming the name of the bank on a good bill is even and perfect; on a counterfeit it is uneven and imperfect.

2. Examine the vignette or picture at the top of the note closely. If the note be genuine, the faces have a life-like expression, the eyes are well-defined, showing the pupil and the white distinctly, the drapery or dress fits well, looks easy and natural, and shows the folds very plainly; in short, the entire figure harmonizes. The sky is clear, or transparent, soft or even, not scratchy, and all the different objects have a finished appearance. In the genuine note all the small figures in the background are perfectly executed.

3. Examine the lettering. In a genuine bill it is absolutely perfect. There has never been a counterfeit put out but was more or less defective in the lettering.

4. Examine the medallion rulings and the circular ornaments around the figure carefully, and see if they are uniform, regular

and smooth. If there are two medallions on a note, designed to be alike, they are exactly alike, as they are from the same original die. This work is done by a geometrical lathe, a machine of great cost, which produces fine, ornamental circles of such exquisite uniformity and perfection that it is almost impossible for a counterfeiter to produce a good imitation. A microscope is a great aid in examining the finer work.

5. Examine the signature of the president and the cashier. In some counterfeits they are lithographed *fac-similes*, inked over with a pen, giving them the appearance of being stamped. The stroke has a dead color and rough edge, and the pen does not always follow the hair-stroke curve exactly. The genuine signatures, being written with a pen, look more or less glossy, and the stroke has a smooth edge.

6. The paper of a counterfeit U. S. note is always of an inferior quality, while the government has the best and most perfect system of manufacturing the highest grade of paper. The first notes printed on this paper, in 1869, had silk fiber distributed promiscuously all through the paper, then came notes having silk threads running through them lengthwise near the top and bottom, and later on notes having distinctive bands of fibers distributed across and near their ends. By holding the bills up to the light you can easily see the fibers or threads in each bill. This is one of the best tests of a genuine bill, because no counterfeiter can imitate the paper of the bills in this respect.

7. Bank notes that have been altered by what is called the "pasting process" can be detected by holding them to the light. The parts pasted on will then be easily discovered. If any alteration has been made by substituting letters or figures for others that have been erased, the denomination in the center of the note, if carefully examined, letter by letter, will be found to be blurred and improperly formed, and the parallel lines irregular and imperfect.

8. The texture of the paper between the letters is frequently destroyed. This defect can be discovered by comparing the paper between the letters with that immediately above and below them. Sometimes the ink of the altered part is different from the rest of the note.

9. The ink used in genuine notes is very difficult to imitate. It gives a clear, glossy impression, while counterfeiter's ink looks dull, smutty and muddy.

10. The numbers on the genuine bills are printed in either red or blue ink of a permanent brilliancy, so that no matter how dim the rest of the bill has become, the numbering always stands out clear and distinct.

These rules are especially approved by New York bankers.

One should be careful not to be imposed upon by a stranger seeking the accommodation of having one large bill exchanged for several small ones.

One should acquire the habit of looking sharply at a bill before taking it, especially of a stranger, and, more especially, at a place of amusement, or where there is a special tendency to haste and liability to imposition.

POSTAL INFORMATION

POSTAL SERVICE OF THE WORLD

Two-thirds of all the letters which pass through the postoffices of the world are written by and sent to people who speak English. There are substantially 500,000,000 persons speaking colloquially one or another of the ten or twelve chief modern European languages, and of these about 25 per cent, or 125,000,000 persons, speak English. About ninety million speak Russian, seventy-five million German, fifty-five million French, forty-five million Spanish, thirty-five million Italian and twelve million Portuguese, and the balance Hungarian, Dutch, Polish, Flemish, Bohemian, Danish and Norwegian. Thus, while only one-quarter of those who employ the facilities of the postal departments of civilized governments speak, as their native tongue, English, two-thirds of those who correspond do so in the English language.

This situation arises from the fact that so large a share of the commercial business of the world is done in English, even among those who do not speak English as their native language. There are, for instance, more than 20,000 postoffices in India, the business of which in letters and papers aggregates more than 300,000,000 parcels a year, and the business of these offices is done chiefly in English, though of India's total population, which is nearly 300,000,000, fewer than 300,000 persons either speak or understand English.

Though 90,000,000 speak or understand Russian, the business of the Russian post department is relatively small, the number of letters sent throughout the czar's empire amounting to less than one-tenth the number mailed in Great Britain alone, though the population of Great Britain is considerably less than one-half of the population of Russia in Europe.

The Southern and Central American countries, in which either Spanish or Portuguese is spoken, do comparatively little post-office business; the total number of letters posted and collected a year in all the countries of South and Central America and the West Indies being less than in Australia. Chile and Argentina are, in fact, the only two South American countries in which any important postal business is done, and most of the letters received from or sent to foreign countries are not in Spanish, but in English, German or Italian.

POSTAL SERVICE OF THE UNITED STATES

The Growth of the postal service of the United States is amazing. In 1800 there were 903 postoffices, 20,817 miles of mail routes and yearly revenues of $280,804. To-day the post-offices number over 74,000, there are over a half million miles of mail routes, and the yearly revenues exceed $143,000,000.

The postal service of the United States handles over 50 per cent more mail matter than the postal service of Great Britain, about 100 per cent more than the postal service of Germany, and over 100 per cent more than the postal service of France.

Domestic Rates of Postage.—All mailable matter to points in the United States, Canada, Mexico, Cuba, Porto Rico, Hawaii, Guam, Tutuila, and the Philippines, is divided into four classes under the following regulations:

First-Class Matter.—This class includes letters, postal cards, "post-cards," and anything sealed or otherwise closed against inspection, or anything containing writing not allowed as an accompaniment to printed matter under class three.

Rates of letter postage, two cents per ounce or fraction thereof.

Rates on local or drop letters at free delivery offices, two cents per ounce or fraction thereof. At offices where there is no free delivery by carriers, one cent per ounce or fraction thereof

Rates on postal cards, one cent (double or "reply" cards, two cents). Nothing must be added or attached to a postal card, except that a printed address slip not larger than 2 inches by ¾ of an inch may be pasted on the address or message side. The addition of anything else subjects the card to letter postage. Cards that have been spoiled in printing or otherwise will be redeemed from the original purchasers at 75 per cent of their face value, if unmutilated. "Post cards" or private mailing cards bearing written messages may be transmitted in the domestic mails at the rate of a cent apiece, stamps to be affixed by the sender; such cards to be sent openly in the mails.

Rates on Specially Delivered Letters, ten cents on each letter in *addition* to the regular postage. This entitles the letter to immediate delivery by special messenger. Special delivery stamps are sold at postoffices, and must be affixed to such letters. An ordinary ten-cent stamp affixed to a letter will *not* entitle it to special delivery. The delivery, at carrier offices, extends to the limits of the carrier routes. At non-carrier offices it extends to one mile from the postoffice. Postmasters are not obliged to deliver beyond these limits, and letters addressed to places beyond must await delivery in the usual way, notwithstanding the special delivery stamp.

Prepayment by stamps invariably required. Postage on all letters should be *fully* prepaid, but if prepaid one full rate and no more, they will be forwarded, and the amount of deficient postage collected on delivery; if wholly unpaid, or prepaid with less than one full rate and deposited at a postoffice, the addressee will be notified to remit postage; and if he fails to do so, they will be sent to the Dead Letter Office; but they will be returned to the sender if he is located at the place of mailing, and if his address be printed or written upon them.

Letter rates are charged on all *productions by the typewriter* or manifold process, and on all printed imitations of typewriting or manuscript, unless such reproductions are presented at postoffice windows in the minimum number of twenty identical copies separately addressed.

Letters (but no other class of mail matter) *will be returned* to the sender free, if a request to that effect is printed or written on the envelope. There is no limit of weight for first-class matter fully prepaid.

Prepaid letters will be *reforwarded* from one postoffice to another upon the written request of the person addressed, with-

out additional charge for postage. The direction on forwarded letters may be changed as many times as may be necessary to reach the person addressed.

Second-Class Matter.—This class includes all newspapers, periodicals, or matter exclusively in print and regularly issued at stated intervals as frequently as four times a year, from a known office of publication or news agency, to actual subscribers or news agents, and transient newspapers and publications of this class mailed by persons other than publishers. Publications having the characteristics of books and such as are not subscribed for on account of their literary merits, but because of other inducements, are not eligible to second-class privileges. Second-class matter also includes periodical publications of benevolent and fraternal societies, organized under the lodge system and having a membership of a thousand persons, and of the bulletins and proceedings of strictly professional, literary, historical, and scientific associations and institutions, trade unions, etc., provided only that these be published at stated intervals not less than four times a year, and that they be printed on and be bound in paper. Publishers who wish to avail themselves of the privileges of the act are required to make formal application to the department through the postmaster at the place of publication, producing satisfactory evidence that the organizations represented come within the purview of the law, and that the object of the publications is to further the objects and purposes of the organizations.

Rates of Postage to Publishers, one cent a pound or fractional part thereof, prepaid in currency. Publications designed primarily for advertising or free circulation, or not having a legitimate list of subscribers, are excluded from the pound rate, and pay third-class rates.

Second-class publications must possess legitimate subscription lists approximating 50 per cent of the number of copies regularly issued and circulated by mail or *otherwise.* Unless they do, pound-rate privileges are revoked or withheld.

Publications sent to actual subscribers in the county where published are free, unless mailed for local delivery at a letter-carrier office.

Rates of postage on *transient newspapers,* magazines, or periodicals, one cent for each four ounces or fraction thereof. It should be observed that the rate is one cent for each four ounces, not one cent for each paper contained in the same

wrapper. This rate applies only when a complete copy is mailed. Parts of second-class publications or partial or incomplete copies are *third-class matter.* Second-class matter will be entitled to special delivery when special delivery ten-cent stamps are affixed in addition to the regular postage.

Transient second-class matter must be so wrapped as to enable the postmaster to inspect it. The sender's name and address may be written in them, but any other writing subjects the matter to letter postage. The name and address of the sender may also be written on the wrapper.

Third-Class Matter.—Mail matter of the third class includes printed books, pamphlets, engravings, circulars in print (or by the hectograph, electric-pen, or similar process when at least twenty identical copies, separately addressed, are mailed at postoffice windows at one time), and other matter wholly in print, proof-sheets, corrected proof-sheets, and manuscript copy accompanying the same.

The rate on matter of this class is *one cent for each two ounces or fraction thereof.*

Manuscript unaccompanied by proof-sheets must pay letter rates.

Third-class matter must admit of easy inspection, otherwise it will be charged letter rates on delivery. It must be fully prepaid, or it will not be forwarded.

The limit of weight is four pounds, except single books in separate packages, on which the weight is not limited. It is entitled, like matter of the other classes, to special delivery when special delivery stamps are affixed in addition to the regular postage.

Upon matter of the third class, or upon the wrapper or envelope inclosing the same, or the tag or label attached thereto, the sender may write his own name, occupation, and residence or business address, preceded by the word "from," and may make marks other than by written or printed words to call attention to any word or passage in the text, and may correct any typographical errors. There may be placed upon the blank leaves or cover of any book, or printed matter of the third-class, a simple manuscript dedication or inscription not of the nature of a personal correspondence. Upon the wrapper or envelope of third-class matter, or the tag or label attached thereto, may be printed any matter mailable as third-class, but there must be left on the address side a space sufficient for the legible address and necessary stamps.

Fourth-Class Matter.—Fourth-class matter is all mailable matter not included in the three preceding classes which is so prepared for mailing as to be easily withdrawn from the wrapper and examined. It embraces merchandise and samples of every description, and coin or specie.

Rates of postage, *one cent for each ounce or fraction thereof* (except seeds, roots, bulbs, cuttings, scions, and plants, the rate on which is *one cent for each two ounces or fraction thereof*). This matter must be fully prepaid, or it will not be forwarded. The affixing of special delivery ten-cent stamps in addition to the regular postage entitles fourth-class matter to special delivery. (See remarks under *First-Class Matter.*)

Articles of this class that are *liable to injure or deface the mails,* such as glass, sugar, needles, nails, pens, etc., must be first wrapped in a bag, box, or open envelope and then secured in another outside tube or box, made of metal or hard wood, without sharp corners or edges, and having a sliding clasp or screw lid, thus securing the articles in a double package.

Such articles as *poisons, explosives,* or *inflammable articles, live animals, insects, fruits,* or *vegetable matter* liable to decomposition, or substances exhaling a bad odor will not be forwarded in any case.

Firearms may only be sent in detached parts.

Limit of weight of fourth-class matter, four pounds.

The name and address of the sender, preceded by the word "from," also any marks, numbers, names, or letters for the purpose of description, such as prices, quantity, etc., may be written on the wrapper of fourth-class matter without additional postage charge. A request to the delivering postmaster may also be written asking him to notify the sender in case the package is not delivered.

Registration.—All kinds of postal matter may be registered at the rate of eight cents for each package in addition to the regular rates of postage, to be fully prepaid by stamps. Each package must bear the name and address of the sender, and a receipt will be returned from the person to whom addressed. Mail matter can be registered at all postoffices in the United States.

An indemnity, not to exceed $25 for any one registered piece, or the actual value of the piece, if it is less than $25, shall be paid for the loss of first-class registered matter.

Domestic Money Orders.—Domestic money orders are issued

by money-order postoffices for any amount up to $100, at the following rates:

For sums not exceeding $2.50, 3 cents; over $2.50 to $5, 5 cents; over $5 to $10, 8 cents; over $10 to $20, 10 cents; over $20 to $30, 12 cents; over $30 to $40, 15 cents; over $40 to $50, 18 cents; over $50 to $60, 20 cents; over $60 to $75, 25 cents; over $75 to $100, 30 cents.

Stamped Envelopes.—Embossed stamped envelopes and newspaper wrappers of several denominations, sizes and colors are kept on sale at postoffices, singly or in quantities, at a small advance on the postage rate. Stamps cut from stamped envelopes are valueless; but postmasters are authorized to give good stamps for stamped envelopes or newspaper wrappers that may be spoiled in directing, if presented in whole condition and with satisfactory evidence.

Foreign Postage Rates.—The rates of postage to all foreign countries and colonies (except Canada, Cuba and Mexico) are as follows: Letters, 15 grams (½ ounce), 5 cents; postal cards, each, 2 cents; double postal cards, each, 4 cents; newspapers and other printed matter, per 2 ounces, 1 cent. Commercial papers: Packets not in excess of 10 ounces, 5 cents; packets in excess of 10 ounces, for each 2 ounces or fraction thereof, 1 cent. Samples of merchandise: Packets not in excess of 4 ounces, 2 cents; packets in excess of 4 ounces, for each 2 ounces or fraction thereof, 1 cent. Registration fee on letters or other articles, 8 cents.

Ordinary letters for any foreign country (except Canada and Mexico) must be forwarded whether any postage is prepaid on them or not. All other mailable matter must be prepaid, at least partially. Matter mailed in the United States addressed to Canada, Cuba or Mexico is subject to the same postage rates and conditions as it would be if it were addressed for delivery in the United States. Full prepayment is required upon all registered articles; and postage upon all articles other than letters is required to be prepaid, at least in part. If the postage is not prepaid in full, double the amount of the deficiency will be collected of the addressee when the article is delivered. The rate on "commercial papers" per 2 ounces is the same as for "printed matter," except that the lowest charge on any package, whatever its weight, is 5 cents. The rate on samples of merchandise per 2 ounces is also the same as for "printed matter," except that the lowest charge on any package, whatever its weight, is 2 cents.

Articles of every kind and nature which are admitted to the United States domestic mails are admitted, at our domestic postage rates and conditions, to the mails exchanged between the United States and the United States Postal Agency at Shanghai, China. Articles addressed for delivery at the following places in China, namely: Chefoo (Yentai), Chin-Kiang, Chung-King, Hankow, Hang-Chow, Ichang, Kaiping, Kaigan, Kinkiang, Nanking, New-Chwang, Ningpo, Ourga, Peking, Shanghai, Taku, Tientsin, Wenchow, Wuchang, Wuhu and Yentai, are transmissible in the mails made up at San Francisco, Seattle and Tacoma for the United States Postal Agency at Shanghai; but at places other than Shanghai additional charges for postage may be collected of the addressees upon the delivery of the articles.

Parcels Post.—The first parcels post convention between the United States and any country in Europe was signed between the United States and Germany on August 26, 1899, and went into operation October 1. It was the beginning of a postal service by means of which articles of merchandise may be exchanged by mail between the two countries, provided they are put up in packages which do not exceed 4 pounds 6 ounces in weight. The postage rate for parcels going from the United States to Germany is fixed at 12 cents for each pound or fraction of a pound. The rate in Germany on parcels for the United States is fixed at 1 mark 40 pfennigs a parcel, whatever its weight. Provision is made for customs declaration and payment. The United States had parcels post conventions with several countries in Central and South America and the West India Islands, but this was the first convention made with any country in Europe. The law empowers the Postmaster General to make such conventions by and with the advice and consent of the President.

BE CAREFUL

The carelessness and oversight of a hurrying people is exemplified by the report of the Dead Letter Office at Washington, that there are on the average 213 letters and parcels without any address whatever received there daily. Considerably more than half of them contain money. In a single year (1903) the Dead Letter Office received 249,255 letters, all containing postage stamps, and besides these $5,821.96 in postage stamps that

had gotten out of the letters were found loose in the mail bags.

The Dead Letter Office returns what it can, but the carelessness or ignorance which misdirects letters is very apt to record no return address for the enlightenment of the postoffice. In consequence, while there were in the same year 2,544,379 letters sent to the Dead Letter Office, which were subsequently delivered to their owners, and 5,806 returned to the writers, there were 6,111,493 that gave no clue and were destroyed. There were sold at auction 5,702 pieces of merchandise that came to the Dead Letter Office and could not be delivered; also 936 parcels of books and 476 pieces of jewelry.

Suggestions.—Always write "Transient," or "General Delivery," on matter for persons not living where you send mail to them.

When directing to cities, always add the street and number, or postoffice box, of the person addressed, unless marked "Transient," or "General Delivery."

To insure certainty in dispatch of mail, give the county in which the postoffice is, and spell out the name of the State in full.

If you will write or print your name and address (and the contents, if a package) in the upper left-hand corner of your mail matter, it will be returned to you for correction, if improperly addressed, or insufficiently paid, and if not called for at its destination, it can be returned to you without going to the Dead Letter Office. If a letter, it will be returned free.

Register all valuable letters and packages.

SALESMANSHIP

Skill in the art of selling goods has been reduced to a science, and schools for teaching this new science of "salesmanship," as it is called, have been established at New York, Chicago, and other large cities in the United States.

How to Sell Goods.—The following instructions, drawn up by Mr. John A. Howland, an experienced and successful salesman, are worthy of careful study by those about to enter upon a mercantile life and by others who have thus far failed of the success they hoped for when entering upon their business career.

The Highest Class Salesman never appears to work hard to make a sale. Usually he is not a great talker. It is the clerks in cheap stores who talk hard and fast; they hustle and sweat and appear to try to corner their customers and to browbeat them into buying. The first-class salesman is cool and easy in manner, because he has studied his art and knows just how to proceed to make a sale. The great talker may be a good salesman, but he chooses the hardest road and necessarily accomplishes less, since he spends too much energy on each customer.

Method Necessary.—The salesman who wants to pass everybody on the road must have, either consciously or unconsciously, a definite method of procedure.

How to Proceed.—Before trying to sell anything find out what the person can buy. When a man has told you just what he wants he has committed himself and he has given you a distinct advantage. In business it is the effort of each man to make the other man "come to him," and as soon as your prospective customer has told you what he wants—material, style, price, etc.—he has "come to you;" all you have to do is to fill the order. If you can do that, there is a strong presumption in favor of a sale without much further effort. Even if he changes his mind and refuses to buy the thing he asked for, you can ask once more his desires and again try to satisfy them in the required article.

Illustration.—Suppose, for example, you are selling subur-

ban lots on a commission. You go out on the train some morning; perhaps you get to talking on the way out with some of your firm's prospective customers. Don't talk at random; try to draw out your man as to what he wants, how much he can pay, cash or in payments. All that you learn about his business, his experience or lack of it in real estate deals, his income, his savings, etc., is just so much to your advantage, because, with all this information about him and his wants, you can pick out just one lot and, ignoring all the rest, spend all your time and energy talking up its merits. If you proceed skillfully you will not have to ask him for a deposit; he will probably ask you to accept one. If he does not get as far as this you have nothing for which to blame yourself, since you have followed the only intelligent method for making a sale.

Showing Goods at Random.—For you as a dry goods clerk to bring out goods at random, without first ascertaining just what a customer wants, shows lack of method and therefore lack of intelligence. Ten chances to one you will not strike what the person wants. You have, therefore, placed yourself at a disadvantage at the outset, lowered your own dignity, and lessened the value of your judgment in the eyes of your prospective customer. If he is a superior man he will resent this waste of time, and feel, even if he does not display, impatience.

How Some Sales are Lost.—If you first find out what a person wants and can pay for, you escape the serious danger of showing the prospective purchaser something he or she will want but cannot pay for. Many a possible sale is lost in just this way. If you show a woman a $30 hat who has no intention of spending more than $12, she may be so pleased with the more expensive article that nothing cheaper will suit her. But she is unable to buy the $30 hat; therefore she hesitates long and finally leaves the shop without buying anything. If you had first found out that she expected to pay only $12, you might have kept the $30 beauties out of sight and so have easily satisfied her and completed the sale. This is a kind of failure that all successful salesmen must carefully guard against. Even if you should at

last bring the woman who admired the $30 hat to the point of buying the $12 article she could pay for, you would have wasted time and energy that you might easily have saved.

Importance of Concentration.—Another advantage in first finding out what your customer wants is that you can talk so much more forcibly than you can if you scatter your efforts. Suppose you are selling men's shirts and you say: "Here's something nice at $2.50." The man seems to like that; he picks it up and looks closely at it while you dilate on its good qualities. A minute later he says: "Well, I don't want to pay more than $2.00." All you can do now is to go back to the $2 line and say: "Well, these are nice, too," etc. Weak, isn't it? After committing yourself in favor of the more expensive grade of shirts, you have discounted beforehand all you can possibly say in favor of the $2 article. If you want to talk effectively and convincingly, you must concentrate your attention on the one article the man can pay for.

If this rule of first finding out a customer's wants were strictly adhered to, think how much time would be saved from those terrors of the dry goods clerks, the women who are merely amusing themselves by fingering piece after piece of goods. Many times if such women were directly and courteously questioned they might admit at the start that they only wanted samples. By further inquiry as to color, weave, price, etc., think how quickly one could get rid of them, without giving offense, either.

Much Talk Not Required.—Besides the direct saving in time and energy you can effect by first getting a customer to state his wants, you save yourself a large percentage of effort and nervous strain by the procedure. After you have produced the article the man has asked for, there isn't much more for you to do; a few judiciously chosen words of admiration and encouragement at most. The man who has thought out his method beforehand does not need to make any great effort or talk much in order to make a sale.

Sell, or Know Why You Fail.—It is, of course, absolutely impossible to make a sale for every inquiry, but what an immense satisfaction it is to know accurately—as you can

know if you follow this method—just when the failure to make a sale was not your own fault and just when it resulted from your own carelessness!

Your confidence and consequently your effectiveness constantly increase as you reduce your work to a systematic procedure. You always "know where you are at," you can note your own progress, and there is with such a method far less cause for possible discouragement. There is nothing so helpful as knowing the cause of each failure you make; for if you know your weak point you can guard against it next time.

The Only Way.—This cautious method of always finding out what a prospective customer wants before taking your goods to him is the only way to become a really high class salesman.

SHIPPING

Shipping is the transporting of goods by water. Shipowners are common carriers, those who send goods are shippers. Owners sometimes charter their vessels to others, who then as charterers take the owner's place.

Exportation.—When goods are shipped abroad, or exported, they have to be cleared at a custom-house. This is done by the shipper filling out and swearing to what is called a shipper's manifest, containing a description of the goods shipped. A bill of lading is then given the shipper as in inland shipments.

A Bill of Lading is a document delivered by a master or owner of a vessel, or the officer of a transportation company, and signed by such parties as an acknowledgment that the goods have been received for transportation.

The bill constitutes the contract between the shipper and the carrier. Three copies of the bill are made out; one is kept by the shipper, another by the party transporting the goods, and the third is sent to the person to whom the goods are directed.

When one of the bills has been used the others become void. The master usually makes certain exceptions in writing; as, "contents unknown" of loose goods; "not ac-

countable for leakage or breakage'' of liquids in bottles; ''not accountable for leakage'' of liquids in casks; and ''pieces in dispute,'' if the shipper's list of articles differs from the ship's account. The master also makes notes of any goods which seem to be in bad condition, lest he should be compelled to make good or pay for any defect, as the bill of lading begins by stating them to be ''shipped in good order and well conditioned.''

Transfer of Bill of Lading.—The bill of lading stands for the property itself, and carries ownership with it. The consignee upon receiving it becomes the owner of it, and can assign the bill of lading and, of course, the right of the goods with it to another party.

Ship's Manifest.—With the aid of the manifests furnished by the shippers the ship's master makes out the ship's manifest, containing the name and tonnage of the vessel, the place to which it belongs, and the name of the master, besides a regular list of the ship's cargo, giving the mark and number of each separate package, the names of the persons by whom the different parcels of goods are shipped, and those of the persons to whom they are consigned, and a specification of the quality of the goods contained in each package. This manifest must be signed by master of the ship, and he cannot clear for a foreign port without it. Within a certain number of hours after arrival at any port and before ''bulk is broken,'' this manifest must be delivered by the ship's master to the customs officer of the port.

Loss or Injury.—As common carriers, owners of vessels or charterers are responsible for any loss or damages of the goods, whether caused by negligence of agents, master or crew on the voyage.

But, as on land, there are exceptions, namely: Carriers by sea are not responsible for damages which occur through some extraordinary peril of the sea, such as storms or piracy or fire at sea and in certain other ways. See U. S. Limited Liability Act.

General Average.—A loss occurring to the cargo when in

order to save the ship in a storm a part of it must be thrown overboard is called General Average.

The law is that if any part of the vessel or cargo is voluntarily sacrificed to save the rest, all the owners of both vessel and cargo must bear the loss in proportion to their interest.

Three conditions, however, are necessary to make it a general average: 1. The sacrifice must be necessary. 2. It must be made voluntarily. 3. It must succeed, i. e., the rest of the vessel must be saved.

Salvage relates to property abandoned at sea. Any one saving property which he finds abandoned at sea is entitled to large compensation for his services. This compensation is called salvage and is intended to encourage such services, which are usually attended with danger.

The amount of salvage varies according to the difficulty and danger and may be one-half of the value of the vessel and cargo saved. All who take part in the rescue, master, crew and owner, share in the salvage. If aid is rendered to a vessel in distress salvage is allowed.

Form of Bill of Lading

New York, December 10, 1904.

Shipped in good order, and well conditioned, by *James C. Hanton* ..... on board the ship *Goodspeed* .... whereof *Chas. Bollman*..... is master, now lying in the port of *New York* ..... and bound for the port of *Rio Janeiro*.....500 *barrels of flour*,

Marked as follows:
Sylvester Clyde,
Rio Janeiro.

being marked and numbered as in the margin, and are to be delivered in the like order and condition at the port of *Rio Janeiro*..... (the dangers of sea only excepted) unto *Sylvester Clyde*..... or his assigns, he or they paying freight for the said cases, with ten cents primage and average accustomed.

In witness whereof I have affirmed to three bills of lading, all of this tenor and date; one of which being accomplished the others to stand void.

HENRY R. SANDFORD.

Contents and weight unknown.

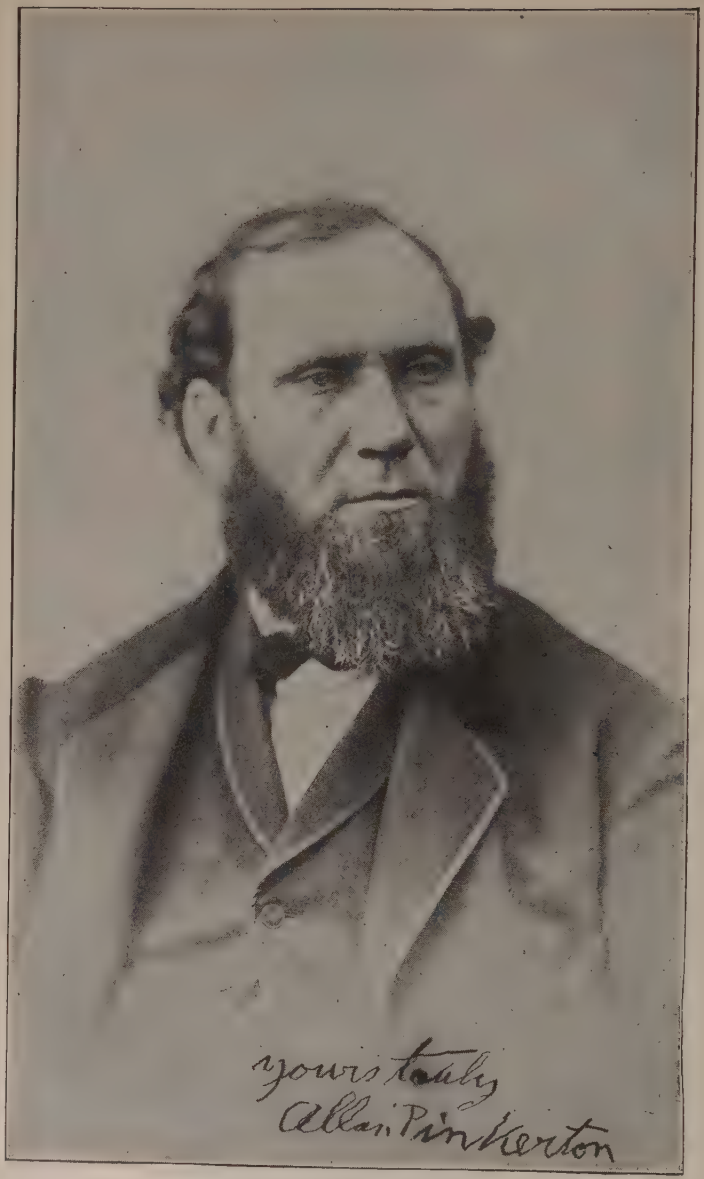
[*In the above form, Hanton is the shipper or consignor, Clyde the consignee, and Sandford the carrier. It might be signed by the master (Bollman) instead of by Sandford.*]

BUSINESS ABBREVIATIONS

Acct. . . . . . Account
Advtg. . . . . . Advertising.
Agmt . . . . . Agreement.
Agt. . . . . . Agent.
Amt . . . . . Amount.
Art. . . . . . Article.
B. or *Bk* . . . . . Bank.
Bal. . . . . . Balance.
Bbl. . . . . . Barrel.
B. B. . . . . . Bill-book or Bank-book.
B. Ex. . . . . . Bill of Exchange.
*B.P.*or*BillsPay.* Bills Payable.
*B.R.*or*BillsRec.* Bills Receivable.
Bo't . . . . . Bought.
Bush . . . . . Bushel.
C. or *C't.* . . . . . Cent.
Cash. . . . . . Cashier.
C. B. . . . . . Cash Book.
Cer. . . . . . Certificate.
Chgd. . . . . . Charged.
Ck . . . . . Check
Co. . . . . . Company.
C. O. D . . . . . Collect on Delivery.
Com. . . . . . Commission
Con. or *Const* . . Consignment.
Cr. . . . . . Creditor.
Cwt. . . . . . Hundred weight.
D. B. . . . . . Day Book.
Dep. B .. . . . . Deposit Book.
Dft. . . . . . Draft.
Dis. . . . . . Discount.
Do. or *do.* . . . . . (Ditto) The same.
Doz . . . . . Dozen.
Dr. . . . . . Debtor.
Ds. or *ds.* . . . . . Days.
ea. . . . . . Each.
E. E. . . . . . Errors excepted.
E. & O. E. . . . . . Errors and omissions excepted.
Ex. or *Exch.* . . . Exchange.
Exp. . . . . . Expense.
fav . . . . . Favor.
F.B. E. . . . . . Foreign Bill of Exchange.
For'd . . . . . Forward.
Ft. or *ft* . . . . . Foot *or* Feet.
Gal. . . . . . Gallon.
Guar . . . . . Guarantee.
Hdkf . . . . . Handkerchief.
Hhd. . . . . . Hogshead.
Hund. . . . . . Hundred.
I. or *Inv* . . . . . Invoice.
I. B . . . . . Invoice Book.
Ins. . . . . . Insurance.
inst. . . . . . (Instant) The present month.
Insol . . . . . Insolvency.
Invt. . . . . . Inventory.
J. or *Jour.* . . . . Journal.
J P. . . . . . Journal page.
L. B. . . . . . Letter Book.
lbs . . . . . Pounds.
L. F. . . . . . Ledger Folio.
Mdse. . . . . . Merchandise.
Memo. or *mem.* Memorandum.
Mols . . . . . Molasses.
Nat. . . . . . National.
N. B. . . . . . (Nota Bene) Take Notice.
Net . . . . . Without deduction.
O. I. B . . . . . Outward Invoice
P. or *p* . . . . . Page. [Book.
Payt. . . . . . Payment.
Pd. . . . . . Paid.
Pkg. . . . . . Package.
Per or *pr* . . . . . By the.
per ct. . . . . . (Per centum) By the hundred.
P. & L . . . . . Profit and Loss.
Pr. . . . . . Pair.
Prem. . . . . . Premium.
prox. . . . . . (Proximo) The next month.
Ps . . . . . Piece or Pieces.
P. C. B. . . . . . Petty Cash Book.
Recd . . . . . Received.
R. R . . . . . Railroad.
S. B. . . . . . Sales Book.
S. S. . . . . . Steamship.
Shipt. . . . . . Shipment.
St. Dft. . . . . . Sight Draft.
Stg. . . . . . Sterling.
Sunds . . . . . Sundries.
Tr. or *Trans* .. Transaction.
ult. . . . . . (Ultimo) The last month.
viz. . . . . . (Videlicet) To wit; namely.
vs. . . . . . (Versus) Against.
Yds. . . . . . Yards.
$ . . . . . Dollar.
¢ . . . . . Cents.
£ . . . . . Pounds Sterling.
d . . . . . Pence.
@ . . . . . At, *or* to.
% . . . . . Per cent.
℀ . . . . . Account.
〃 . . . . . (Ditto) The same.
. . . . . Number.
√ . . . . . Check Mark.
1^1 . . . . . One and 1 fourth.
1^2 . . . . . One and 2 fourths.
1^3 . . . . . One and 3 fourths.
Int. . . . . . Interest.

PART XII

Swindling Schemes Exposed, Trusts, Monopolies, etc.



1819 **ALLAN PINKERTON** 1884

Honest Sagacious Tactful

The Founder of Pinkerton's National Detective Agency

BEWARE OF SWINDLERS

SWINDLING SCHEMES

Barnum, the great American showman, speaking from abundance of experience, declared that "the American people like to be humbugged." He might have gone farther without departing from the truth and added, "and they are the easiest people on the face of the earth to be swindled."

The millions of dollars that recently have been paid to persons conducting various fraudulent "get-rich-quick" schemes in all parts of the country, prove this to be true beyond question. Rich and poor, wise and otherwise, have all alike been duped by these pretended money-making schemes.

It is important, then, that every one should be on his guard against fraud, and the following brief words of caution should be ever kept in mind:

1. Remember that you can't get something for nothing, and the man who presents to you a seemingly plausible scheme with that purpose in view does so in his own interest and not yours. His game is, "Heads I win, tails you lose."

2. Put not your confidence in strangers, especially if you are yourself a stranger in a large city. The "confidence man" is abroad in the land.

3. Never be tempted into engaging in any scheme for making money in an underhand or dishonorable manner. Most people that go wool-gathering come back fleeced.

4. Never try to beat a gambler's own game. It is like betting against a sure thing.

5. Never sign your name to any writing until you are certain you understand its import, and never under any circumstances do so to accommodate a stranger. By neglecting to observe these simple precautions many a man and his money have been quickly parted.

A careful study of the swindling schemes here described will put the reader on his guard against being defrauded of his hard-earned money by unprincipled sharpers.

THE "GREEN GOODS" SWINDLE

This is a scheme in which the swindlers act upon the theory that all men are more or less dishonest, and are ready to steal or defraud whenever they are sure they will not be found out. The headquarters of these swindlers are in New York City, and from there they send out a typewritten letter to a business man or farmer somewhere in the West, offering to sell him a certain amount of "green goods" at ten cents on the dollar. The "green goods" are referred to in such a manner as to make certain that the person receiving the letter will understand that counterfeit money is meant. No name is signed to the letter, but on a separate slip of paper a name and address are printed.

If a reply is sent in response to the letter a second letter is mailed to the intended victim, and enclosed with it is what purports to be a clipping from a newspaper, giving an account of some government plates having been stolen from the Treasury Department at Washington, and money printed from them and placed in circulation, and of so perfect a character that the government officials were not able to detect the difference between it and the genuine money. In this letter the pros-

pective purchaser is informed that he will be known hereafter in New York only by the name of "Mr. Evans," as it would not be safe to conduct the business with him under his right name The letter urges him to come on to New York and satisfy himself that the goods are all right. It assigns a meeting place and suggests a signal by which each is to recognize the other. If "Mr. Evans" goes to New York and is identified all right, the deal goes through. He is shown a package of genuine money, containing five thousand dollars in five and ten-dollar bills. He examines the money carefully, and compares it with some good bills he has in his pocket. The result is satisfactory, and the victim turns over $500 in good money for the five-thousand-dollar package, and puts what he thinks to be it into his grip and hurries away. But, alas, when he arrives at home and in secret examines his package he finds, to his amazement and sorrow, that it contains—not money, either good or counterfeit, but simply oblong pieces of coarse brown paper. A "dummy" package has been deftly substituted for the one that contained the five thousand dollars he had seen counted, and he finds himself out to the amount of five hundred dollars and the cost of his trip. Not only his money is gone, but his own respect for himself as an honest man is gone with it. And he is in no position to complain to the authorities, for he was himself engaging in a scheme to defraud his own neighbors, and so, like hundreds of others similarly victimized, he submits to his loss and humiliation in sorrowful silence

THREE CARD MONTE

This is an old but still commonly practiced swindling game. It is usually worked on trains or at county fairs. The player takes three cards, shows their faces to his intended victim, turns them down, shifts them around carelessly, and then asks him to pick a certain one of the cards out—the ace, for instance. The victim at once selects the right card. The player pretends to be mystified, and bets a half dollar that he can't do it again. The victim takes the bet and again promptly picks the right card. The sharper pretends to be awfully discomfited, but shifts the cards about again and with an oath declares he will bet $40 that the "Smart Alec" can't tell where the ace is now. The victim, who has been watching the cards all the while, thinks he knows just where the ace is again, puts up his $40 and picks out—not

the ace this time, but the two-spot. He thought he knew for a certainty just where the ace was all the time because he had noticed that one corner of that card was slightly turned up, which fact he thought the sharper had failed to observe, but which in truth was the very bait set by the sharper to catch the gudgeon. At the proper moment he deftly turned up the corner of another card and smoothed down that of the ace. No one should ever try to beat this game, as the sharper always "wins out."

SHELL GAME

This game also usually is worked at county fairs, and, like three card monte, its success depends upon sleight of hand deception. Three half shells of English walnuts and a little ball of hard rubber or celluloid are used in working the game. The sharper rolls the ball around on a box or barrel-head, and covers it first with one shell and then with another. "Pick out the shell the ball is under and you get five dollars," he says. A confederate standing near replies: "I think I can beat that game easy enough," and at once picks out the shell the ball is under. To the apparent chagrin of the sharper, he walks off with the money in evident good humor with himself. One of the "innocents" in the crowd, who has watched the performance very closely and thinks he knows exactly how it was done, offers to wager $10 he can pick the shell the little ball is under. He puts up his money, picks out the middle shell and—loses. Had he picked out either of the other shells the result would have been the same, for the ball at the time he picked was not under any of them, having been retained by the sharper in the grip of his little finger. And yet when he picked up one of the other shells he showed the crowd that the ball was under that. This is one of the most deceptive and successful games practiced by sharpers. Steer clear of it.

ENVELOPE TRICK

This trick is worked through the help of a confederate. One of the sharpers has a box of envelopes containing tickets with numbers on, indicating certain prizes displayed by the sharper. On paying a certain sum of money a person is allowed to pick out any of the envelopes and get the prize it calls for.

The confederate pays the price asked for a chance, and of course chooses an envelope which he knows contains a card

calling for a valuable prize, as a watch or a five-dollar bill. His success induces others to try their luck, and a rich harvest is often reaped by the sharpers in a few minutes. And then they move to some other spot to fleece a fresh crowd of innocents.

BUNCO

This confidence game has been exposed a great many times in the newspapers, but it still finds victims in all the large cities of the country. It usually requires as many as four sharpers to carry it through. The first move is for one of the sharpers to "meet by chance" some prosperous-looking stranger in the city and accost him familiarly something after this manner: "Why, how do you do, Mr. Wilson? How's the dry goods business up in Rockford?"

"Excuse me," the stranger replies, "but you are mistaken in the person. My name is Myers, not Wilson. I am from Springfield, not Rockford, and my line is hardware, not dry goods."

The sharper profusely begs his pardon, and at once communicates what he has learned to one of his confederates, who proceeds to look up particulars regarding Springfield's prominent citizens in the *American Bank Note Reporter*, while the first sharper keeps tab on Mr. Myers.

Presently the confederate "accidentally" meets the victim and exclaims: "Why, Mr. Myers, how do you do? How's everybody down at the Capital?"

"I beg your pardon, sir, but you have the advantage of me," replies Mr. Myers.

"Why, have you forgotten meeting me in company with my uncle, Mr. S. H. Jones, of the State National Bank, at Springfield?"

Of course Mr. Myers doesn't remember, but he hesitates to admit the fact, and finally is convinced that they have met before. Having once obtained the confidence of the Springfield merchant it becomes an easy matter to steer him into the den where certain other confederates of the sharper are in waiting to fleece the wealthy victim.

This is accomplished in many different ways, sometimes by means of some swindling game resembling faro, or by inducing him to cash a bogus check, or engage in a fraudulent game of cards, and occasionally by the administration of knockout drops and robbery.

FLIM FLAM

This swindle is played on merchants in the following manner: A man enters a store and calls for some trifling article, say a cake of shaving soap, and after fumbling in his pockets for change and finding none, hands out a ten-dollar bill. This the merchant changes and gives him back $9.90. The sharper proceeds to count his change, but suddenly hesitates and says: "Oh, never mind, I find I have a dime after all, and there's no use in my taking all your small change. Just give me that bill back, and here's the exact amount."

While the merchant turns to the cash register to get the bill, the sharper slips the $9.90 into his pocket, and at the same moment his confederate walks into the store, and as the merchant is handing back the bill and receiving the dime, he calls his attention to some article in the show case and engages him in conversation in such a clever manner as to make him forgetful of the transaction that has just taken place. While the merchant is waiting on the confederate the first sharper walks out of the store $9.90 ahead.

The probability is that the merchant will never think of the transaction again or discover that he has been swindled.

GETTING THE FARMER'S SIGNATURE

PATENT FENCE SWINDLE

This is one of the numerous patent right frauds by which so many farmers have been imposed upon. It is worked as follows: A well-dressed, smooth-spoken stranger calls upon a farmer and shows him an artistic illustration of a patent farm fence, explains all about it and proves beyond question that it is the cheapest and most endurable fence every devised. The farmer is soon convinced that the fence is bound to have a large sale, and is prevailed upon to take the agency for his township. All the fence man asks of the farmer in order to secure the exclusive right to manufacture and sell the fence in his township is to sign his name to a note for $150. The farmer has dreams of placing one of his patent fences around every farm in the township, and realizing therefrom enormous profits. But when he goes to the city and prices the materials necessary for constructing the fence, he finds that they are so costly that the fence could not be made cheap enough to permit of its being sold at a price any farmer would be willing to pay for it. In the meantime the note has been discounted at a bank, and passed into the hands of an innocent holder. The fence man has fled the country, and the farmer is bound to pay the $150 and interest.

FENCE STRETCHER MACHINE FRAUD

This is one of the shrewdest frauds by which farmers are imposed upon. It is executed as follows: The sharper represents to the farmer that he is the agent of a company manufacturing and selling machines for stretching barb-wire in the construction of wire fences. He has a machine with him, but not for sale. All he desires is the privilege of exhibiting the value of his machine, and he offers to build the farmer thirty rods of fence without costing the farmer a cent, just to show how the machine operates. The farmer is asked to sign what appears to be a mere request to forward the desired fence material to his address. This being done the machine is placed in the barn to await the arrival of the materials for fence. In a few days another man turns up and presents to the farmer what proves to be an agreement to pay $150 for the machine stored in his barn. The machine is of no earthly use to the farmer, but he finds he has been duped into signing his name to a paper acknowledging the receipt of the machine, and agreeing to pay $150 therefor so many days after date He is legally obligated and must pay.

THE LIGHTNING-ROD SWINDLE

The lightning-rod sharper calls upon a farmer and takes his order for the placing of rods on his barn in the following form:

Moline, Ill., August 9, 1904.

WILLIAM FELL: Please erect at your earliest convenience your lightning-rods on my barn, for which I agree to pay you 7 cents per foot, $3 for each point, $4 for each vane, $5 for each arrow, $1 for each bill or brace, cash when finished, or a note due six months from date thereof and bearing interest at seven per cent.

MORRIS HOMER.

After the contract is signed the sharper inserts a 5 before the 7, making the amount per foot 57 instead of 7 cents. And there being nothing said in the contract as to the number of points, vanes, etc., to be used, the lightning-rod man throws them in "good and plenty," so that instead of the business costing him about $28 as he expected, he finds that the bill runs up to $185, and he is required by law to pay, all because he was guilty of negligence in signing a contract in which the amount per foot to be paid for the rods was stated by a figure only, instead of being written out, and the number of vanes, arrows, braces, etc., was not specified, but left to the discretion of the party erecting the rods. Of course, if the farmer could prove that the figure 5 had been inserted after the contract was signed, and without his consent, it would make the contract void, but it is very seldom possible that this can be done.

Form of Swindling Contract and Note

Newton, Kans., Jan. 2, 1905.

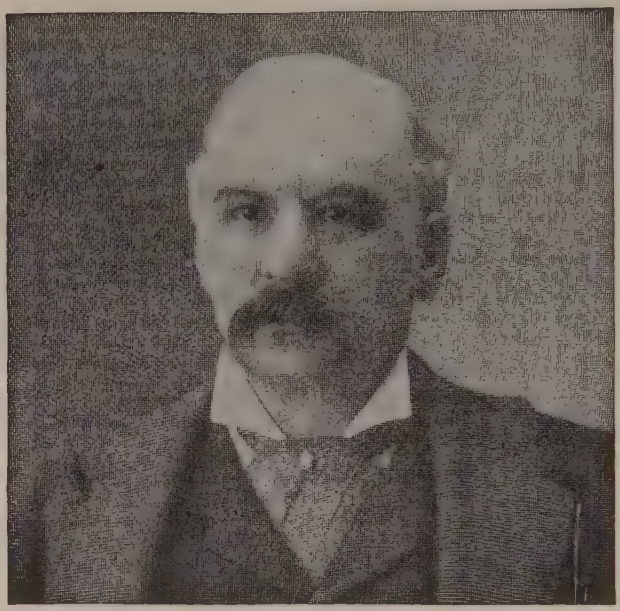
One year after date, I promise to pay to John Dawson or bearer Fifteen Dollars when I sell by order Five hundred and Seventy-five Dollars ($575) worth of hedge plants for value received, with interest at seven per cent. Said Fifteen Dollars when due is payable at Newton, Kans.

GEORGE W. ELLSWORTH, Agent for John Dawson.

1. It looks very innocent and reads smoothly enough, but by cutting off the right-hand portion just after the word "or" in the first line, the sharper has in his possession a negotiable promissory note that is good in the hands of an innocent holder, and that can be discounted at a bank.

2. George W. Ellsworth, the farmer, has by this agreement apparently become agent for John Dawson, and is to pay him only $15.00 when $575.00 worth of hedge plants are sold; it looks rosy to the farmer, but in reality he has become the victim of a shrewd confidence game.

N. B.—Never try to beat a man at his own game nor sign a paper for an unidentified stranger.



J. PIERPONT MORGAN

TRUSTS AND MONOPOLIES

The Trusts which dominate the business world of to-day are the legitimate descendants of the old English monopolies.

Definition.—The old time *monopolies* were grants by the crown securing to one or more persons an exclusive right to carry on some particular branch of trade or manufacture, while the modern *trusts* are organizations formed by the combination of competing firms, which, independently of any grant of a sovereign or State, exert the right and power of controlling the entire business of the particular branch of trade or manufacture in which they are engaged.

History.—In the sixteenth century the people of England complained of the extortions of the monopolies which had been

granted by the crown and the whole system was attacked in Parliament in 1597. No restraining law was passed, because of the personal solicitation of the queen, but in 1601 Parliament took up the subject and a list of the most objectionable monopolies was read in the House of Commons. One member of that body caused a sensation at the time by asking, "Is not bread among the number?"

In 1623 the so-called statute of monopolies was passed, which provided that all monopolies should be illegal, except such as might be granted by Parliament, the only exceptions being the control of new manufactures and inventions. For a time this law put an end to the formation of monopolies, which have now become common under the name of "trusts" in nearly every civilized country of the world.

English Trusts.—In England, despite the industrial energy of the country and its extensive commerce, the trust system has not made the advance it has in some other countries in Europe or in America.

German Trusts.—There are many trusts in Germany. In such industries as brick, stone, plaster of paris, glue, mortar and the like there are about fifty trusts of which a recent writer says: "Of these trusts—in the widest sense of the word—it may be said that by hindering unlimited underbidding they have proved an actual blessing to the trades concerned, without becoming a menace to the public welfare." The same writer says: "The activity and extension of trusts in Germany has not yet led to serious apprehensions or open hatred on the part of large portions of the population, as now appears to exist in the United States. Although aiming primarily at the establishment of better prices, German trusts cannot be accused of the exploitation of the public at large or of the working classes. As regards the establishment of prices, also, the trusts have hitherto displayed a wise moderation."

Russian Trusts.—In Russia, while the courts do not recognize the formation of trusts as legal, strong industrial organizations control many of the commodities. Iron, brandy, sugar, petroleum and a vast number of other products are in the hands of monopolies which oppress the people. Not only is no resistance offered them by the government, but many of them have been organized under the protection and with the assistance of the government.

French Trusts.—Perhaps in no country in Europe has the trust system assumed the proportions it has acquired in France. The iron trade, the chemical industries, the bottle-glass, sugar refining, zinc and many other important lines of industry are controlled by trusts, and have been so for many years.

American Trusts.—In the United States trusts are of comparatively recent origin, but have increased with such rapidity that to-day they outnumber those of all other countries of the world combined. In *Moody's Manual of Corporation Securities* it is stated that there are in this country about 850 trusts or great industrial combinations, with a total capital of $9,000,000,000, and that the railroad consolidations would increase this to $15,000,000,000 of outstanding capital.

Besides these gigantic industrial trusts there are innumerable price-fixing and profit-sharing pools in nearly every industry of the country.

Natural Monopolies, such as railroads, street railways, gas, electric light, and water companies, are not classed as trusts, because they are not composed of naturally competing concerns. Consolidations and price and rate-fixing agreements in these industries exist in nearly every city in the country.

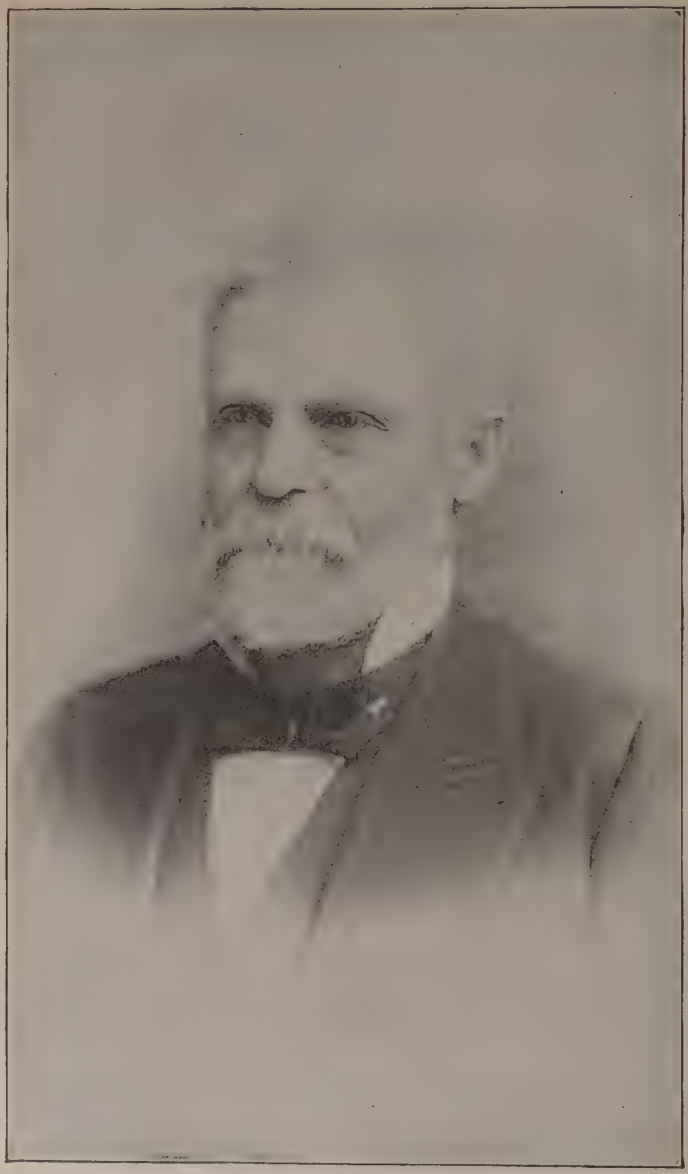
Stringent anti-trust acts have been adopted by the general government and most of the States, but owing to the restrictions these acts have experienced at the hands of jurists, most of them have practically become dead letters. The American trusts having the largest capitals are as follows:

A List of Fifteen of the Principal American Trusts

	Location.	Capital.
Amalgamated Copper Co.	New York	153,888,000
American Can Co	New York	41,233,300
American Sugar Refining Co	New York	50,000,000
American Smelting & Refining Co.	New York	45,000,000
American Tobacco Co	New York	54,500,000
Continental Tobacco Co	New York	48,846,100
Corn Products Co	New York	44,514,425
Distilling Co. of America	New York	44,596,118
International Harvester Co.	Chicago	120,000,000
International Merchant Marine Co.	New York	60,000,000
Standard Oil Co	New York	97,500,000
United Copper Co.	New York	45,000,000
U. S. Leather Co.	New York	62,882,300
U. S. Steel Corporation	New York	508,495,200
Carnegie Co. (Steel, coal, orc. etc.)	Pittsburg	156,800,000

PART XIII

Short Cuts in Figures, Tables, Rules, Weights and Measures



THOMAS E. HILL
Author Hill's Manual
Famous Writer and Compiler

COMMERCIAL ARITHMETIC

The object of the following pages is to set forth methods of making some of the calculations which occur in commercial arithmetic with greater rapidity and ease than attend the ordinary methods of making the same calculations. It is impossible to become proficient in arithmetical computations unless the fundamental principles of arithmetic have been fully mastered, and the more thorough this knowledge is, the more serviceable will the following methods prove to be.

ADDITION

Proficiency in addition can be acquired only by practice. There are no contractions by means of which addition may be performed with rapidity and ease. Practice, and practice only, will secure this first requisite of the accountant. However, a few practical suggestions will prove beneficial to those who have acquired but little proficiency in addition.

The Result Method of Addition

25
84
69
72
86
94
54
484

Explanation.—Beginning with the lower figure in units column, name the *result* only of each successive addition; thus 4, 8, 14, 16, 25, 29, 34; then carrying the 3 to the next column add 3, 8, 17, 25, 32, 38, 46, 48.

To Prove.—Add the columns downward. This method lies in the ability to see and combine the result of two or more figures without stopping to add each separately.

The Group Method of Addition

478
121 } 20
597
464

644
286 } 10
850

422
513
644 } 15
836

5855

Explanation.—Beginning at the right add upward, 15, 25, 45; grouping 6, 4, 3 and 2 for 15; grouping 6 and 4 for 10 to add 15, making 25; and grouping 4, 7, 1 and 8 for 20 to add to 25, making 45, the result of first column. Carrying the 4 tens to the second column, adding as before, etc.

To Prove.—Add the columns downward, grouping as illustrated above.

Note.—Practice in grouping will lead to great proficiency, and after one has become skilled in the same, it is advisable to skip about along the column in order to select those numbers which can be most conveniently grouped.

Horizontal Addition

Numbers when written in horizontal order, as in invoices and other business forms, may be added without being rewritten in vertical columns.

In adding numbers written horizontally more care is requisite that the units shall be of like order, and great certainty of correctness can be had by adding first from left to right and then from right to left.

510, 297, 67, 841, 638 = 2,353. Ans.

The group method may be employed with equal advantage where numbers are written horizontally.

Horizontal addition is not often practiced with numbers containing more than four or five figures. In adding dollars and cents it is best to omit the dollar sign.

4^{9}
2
7
6
5^{7}
4
1
7
3^{7}
6
8
—
53

Easy Methods for Adding Lengthy Single and Double Columns

Explanation.—Begin at 8 and add as near 20 as possible, thus 8, 6, 3 = 17, reject the tens and place 7 to the right of the last figure added, as in example; begin at 7 and add 7, 1, 4 and 5 = 17, reject the tens, place 7 to the right of 5, begin at 6 and add 6, 7, 2 and 4 = 19. Now adding the figures in the new columns, 7, 7 and 9 = 23 + 3 tens rejected = 53. Ans.

7
9^{105}
8
9
8
7
9
6
8
9
8
9
8
7

Explanation.—When the columns reach into the hundreds, as each hundred is reached note the amount opposite the last figure entering into its sum, as shown in example, and then begin to add again, finally adding these results.

The best method of *proof* is that usually employed by business men, viz., beginning at the top and adding down the column. If the result is like the first it may be safely assumed to be correct, for the *same* error, if there were one, would not be likely to occur in the reverse order.

112

The Civil Service Method of Addition

$2,974.60	21
8,947.24	28
2,842.11	36
2,976.54	47
7,894.32	60
9,874.21	39
5,432.18	
4,567.81	$45,509.01

Begin at the right and add each column separately; thus the sum of the first column equals 21, the second 28, the third 36, and so on, and then add the results as shown above.

This method is used by civil service employes, bank clerks, and others who handle large sums of money. The advantage lies in the fact that one's attention may be called to other things and yet he is never at a loss to resume work where he left off.

MULTIPLICATION

The following are contractions in multiplication of simple numbers.

1. To multiply by 10, 100, etc., annex as many ciphers to the multiplicand as there are in the multiplier.

2. To multiply by 5, 50, 500, etc., annex as many ciphers to the multiplicand as there are figures in the multiplier and divide the result by 2.

3. To multiply by 25, 250, etc., multiply by 100, 1,000, etc., and divide the result by 4.

4. To multiply by any number ending in 9, multiply by the next higher number and then subtract the multiplicand.

Example.—Multiply 83 by 39: $83 \times 40 = 3{,}320 - 83 = 3{,}237$.

5. To multiply any number of two figures by 11, write the sum of the two figures between them.

Example.—Multiply 45 by 11: $4 + 5 = 9$, hence 495. Ans.

6. When the sum of two figures is 10 or over, add the 1 to the left-hand figure.

Example. Multiply 74 by 11: $7 + 4 = 11$, hence 814.

7. To square any number of 9's. Beginning at the left write 9 as many times less 1 as there are 9's in the given number, an 8, as many ciphers as 9's and 1.

Example.—Square of 99 = 9,801, of 999 = 998,001.

Lightning Methods of Multiplication

To multiply by $1\frac{1}{4}$, divide by 8, call it tens.
To multiply by $1\frac{2}{3}$, divide by 6, call it tens.
To multiply by $2\frac{1}{2}$, divide by 4, call it tens.
To multiply by $3\frac{1}{3}$, divide by 3, call it tens.
To multiply by $6\frac{1}{4}$, divide by 16, call it hundreds.
To multiply by $8\frac{1}{3}$, divide by 12, call it hundreds.
To multiply by $12\frac{1}{2}$, divide by 8, call it hundreds.
To multiply by $16\frac{2}{3}$, divide by 6, call it hundreds.
To multiply by 25, divide by 4, call it hundreds.
To multiply by $31\frac{1}{4}$, divide by 32, call it thousands.
To multiply by $33\frac{1}{3}$, divide by 3, call it hundreds.
To multiply by 50, divide by 2, call it hundreds.
To multiply by $66\frac{2}{3}$, divide by 15, call it thousands.
To multiply by $83\frac{1}{3}$, divide by 12, call it thousands.
To multiply by 125, divide by 8, call it thousands.
To multiply by $166\frac{2}{3}$, divide by 6, call it thousands.
To multiply by 250, divide by 4, call it thousands.
To multiply by $333\frac{1}{3}$, divide by 3, call it thousands.
To multiply by $37\frac{1}{2}$, take $\frac{3}{8}$ of the number, call it hundreds.
To multiply by $87\frac{1}{2}$, take $\frac{7}{8}$ of the number, call it hundreds.

To Multiply Numbers Ending with 5

To multiply two small numbers each of which ends in 5, such as 35 and 75, take the product of the 3 and 7, increase this by one-half the sum of these figures, and prefix the result to 25. Thus,

35 $5 \times 5 = 25$
75 $7 \times 3 = 21$, $21 + \frac{1}{2}(7 + 3) = 26$
2,625

To Multiply Any Number by 21, 31, 41, etc.

In multiplying any number by 21, or 31, or 401, or any number of two figures where the last is 1, or of three figures, where the last two figures are 01, a good deal of time can be saved by abbreviating the ordinary process as here illustrated. For instance, suppose we have to multiply 231423 by 21. Instead of putting down 231423 with 21 under it, then drawing a line, multiplying by 1, then by 2 or 20, then adding, as is the ordinary custom; all that is necessary is simply to multiply by the 2, placing the product

231423
4628460
4859883

one figure to the left, and then to add. Try this method, using 31, 51, 61, 91, 201, 3001, and 901 as multipliers. There is a saving in the above example of eight figures.

To Multiply by 9, 99, 999, etc.

It is easier for most people to subtract than to multiply. Instead of multiplying by 9, we multiply by 10 and subtract the number from this product.

$$8759632 \times 9 = 87596320$$
$$8759632$$
$$\textit{Product,} \quad = 78836688$$

To multiply by 99, add two ciphers and subtract; to multiply by 999, add three ciphers and subtract, etc.

The Complement Rule

N. B.—The "complement" of a number is a number which when added to it makes it 100. Thus the complement of 94 is 6, of 98 is 2.

To find the product of two numbers, as 94 and 98, for instance, multiply their complements together, and for the other two figures subtract across, either the 2 from the 94 or the 6 from the 98.

$$98 - 2$$
$$94 - 6$$
$$9212$$

Proof of Multiplication in Ten Seconds

Here is a simple *proof* of multiplication which is a modification of the old method of casting out the nines. The *unitate* of a number is the sum of its digits reduced to a unit. Note these examples:

$$2\,4\,5\,6\,2 = 1\,9 = 1\,0 = 1$$
$$3\,9\,8\,4\,6\,9 = 3\,9 = 1\,2 = 3$$
$$4\,0\,0\,2\,9\,8 = 2\,3 = 5$$

The sum of the digits of the first number is 19; these digits added equal 10, and these added equal 1. Note the following example in multiplication:

$$\left.\begin{matrix} 2\,5\,2 = 9 \\ 3\,2\,1 = 6 \end{matrix}\right\} = 5\,4 = 9$$
$$2\,5\,2$$
$$5\,0\,4$$
$$7\,5\,6$$
$$8\,0\,8\,9\,2 = 2\,7 = 9$$

The *unitate* of the multiplier is 9 and the *unitate* of the multiplicand is 6; 6 times 9 equals 54, and the *unitate* of 54 is 9. Now the *unitate* of the product is found to be 9 also, which is a proof of the correctness of the work. Note this example:

$$\left.\begin{array}{l} 7598=29=11=2 \\ 3463=16 \quad\quad =7 \end{array}\right\}=14=5$$

$$\begin{array}{r} 22794 \\ 45588 \\ 30392 \\ 22794 \\ 26311874=32=5 \end{array}$$

It is not necessary to write down as many figures as are written above. The *unitate* of each number can easily be found mentally.

Rapid Multiplication

When the unit figures added equal ten, and the tens are alike, multiply the units and set down the result; add one to either numbers, in ten's place, and multiply by the other, and you have the product.

To multiply any number by $66\frac{2}{3}$, add 3 ciphers and divide by 15.
" " " " " $166\frac{2}{3}$, " 3 " " " " " 6.
" " " " " 125, " 3 " " " " " 8.

The three ciphers increase the number to be multiplied one thousand times, or two ciphers one hundred times, and dividing it by the number of times the multiplier is contained in 100 or 1,000 gives the product.

To Multiply Mixed Numbers

Rule.—1. Multiply the whole numbers together.
2. Multiply the upper whole number by the lower fraction.
3. Multiply the lower whole number by the upper fraction.
4. Multiply the fractions together.
5. Add the four products.

Example.—Multiply $12\frac{2}{3}$ by $8\frac{3}{4}$.

$$\begin{array}{r} 12\frac{2}{3} \\ 8\frac{3}{4} \\ \hline \end{array}$$

1. Whole numbers multiplied.....96
2. Multiply 12 by $\frac{3}{4}$ 9
3. Multiply 8 by $\frac{2}{3}$ ..... $5\frac{1}{3}$
4. Multiply $\frac{2}{3}$ by $\frac{3}{4}$ = 6-12 or..... $\frac{1}{2}$

Add results.....$110\frac{5}{6}$

To Multiply Two Numbers Having the Same Fractions

Rule.—1. Multiply the whole numbers together. $9\frac{2}{3}$
2. Add the two numbers together and multiply this sum by either one of the fractions. $6\frac{2}{3}$
3. Multiply the two fractions together. 54
4. Add the results. $10\frac{4}{9}$

$64\frac{4}{9}$

DIVISION

Lightning Methods of Division

To divide by $1\frac{1}{4}$, remove point one place to left, multiply by 8.
To divide by $2\frac{1}{2}$, remove point one place to left, multiply by 4.
To divide by $3\frac{1}{3}$, remove point one place to left, multiply by 3.
To divide by $8\frac{1}{3}$, remove point two places to left, multiply by 12.
To divide by $12\frac{1}{2}$, remove point two places to left, multiply by 8.
To divide by $16\frac{2}{3}$, remove point two places to left, multiply by 6.
To divide by 25, remove point two places to left, multiply by 4.
To divide by $33\frac{1}{3}$, remove point two places to left, multiply by 3.
To divide by 50, remove point two places to left, multiply by 2.
To divide by 125, remove point three places to left, multiply by 8.
To divide by 250, remove point three places to left, multiply by 4.
To divide by $333\frac{1}{3}$, remove point three places to left, multiply by 3.

Tests of Divisibility

Any number is divisible by 2 when the last figure is even; divisible by 4 when the last two figures are divisible by 4; divisible by 5 when the last figure is 0 or 5; divisible by 3 when the sum of its figures is divisible by 3; divisible by 9 when the sum of its figures is divisible by 9.

The product of any three consecutive numbers is divisible by 6; the product of any four consecutive numbers is divisible by 24.

MULTIPLICATION AND DIVISION COMBINED

When it becomes necessary to multiply two or more numbers together, and divide by a third, or by a product of a third and fourth, it must be *literally done if the numbers are prime.*

For example: Multiply 19 by 13 and divide that product by 7.

This must be done at full length, because the numbers are *prime;* and in all such cases there will result a *fraction.*

But in *actual business* the problems are *almost all* reduceable by short operations; as the prices of articles, or amount called for, always corresponds with some *aliquot* part of our scale of computation. And when two or more of the numbers are *composite numbers,* the work *can always* be contracted.

Example.—Multiply 375 by 7, and divide that product by 21. To obtain the answer, it is sufficient to divide 375 by 3, which gives 125.

The 7 divides the 21, and the factor 3 remains for a divisor. Here it becomes necessary to lay down a *plan of operation.*

Draw a perpendicular line and place all numbers that are to be multiplied together under each other, on the right-hand side, and all numbers that are divisors under each other, on the left-hand side.

EXAMPLES

Multiply 140 by 36, and divide that product by 84. We place the numbers thus:

$$\begin{array}{r|l} 84 & 140 \\ & 36 \end{array}$$

We may cast out *equal factors* from each side of the line without *affecting the result.* In this case 12 will divide 84 and 36; then the numbers will stand thus:

$$\begin{array}{r|l} 7 & 140 \\ & 3 \end{array}$$

But 7 divides 140, and gives 20, which, multiplied by 3, gives 60 for the result.

Multiply 4783 by 39, and divide that product by 13.

$$\begin{array}{r|l} 13 & 4783 \\ & 39\ 3 \end{array}$$

Three times 4783 must be the result.

Multiply 80 by 9, that product by 21, and divide the whole by the product of $60 \times 6 \times 14$.

$$\begin{array}{rr|l} 3 & 60 & 80\ 4 \\ & 6 & 9 \\ 2 & 14 & 21\ 3 \end{array}$$

In the above divide 60 and 80 by 20, and 14 and 21 by 7, and those numbers will stand canceled as above, with 3 and 4, 2 and 3, at their sides.

Now, the product $3 \times 6 \times 2$, on the divisor side, is equal to 4 times 9 on the other, and the remaining 3 is the result.

FRACTIONS

The reciprocal of a number is a unit divided by the number. The reciprocal of a fraction is the fraction inverted. To reduce two or more fractions to a common denominator, multiply all the denominators except its own for a new numerator and multiply all the denominators together for a common denominator.

ADDITION OF FRACTIONS

If the fractions have not a common denominator, reduce them to a common denominator, then add the numerators and place the sum over the common denominator.

$$\text{Add } \frac{2}{3}+\frac{3}{4}+\frac{2}{5}=\frac{40+45+24}{60}=\frac{109}{60}=1\frac{49}{60}$$

Here $3 \times 4 \times 5$ or 60 is the common denominator.

SUBTRACTION OF FRACTIONS

Reduce the fractions to a common denominator, subtract the numerators and place their difference over the common denominator. Subtract $\frac{2}{3}$ from $\frac{3}{4}$. Here the common denominator is $3 \times 4 = 12$, and the difference of the numerators 1, hence $\frac{1}{12}$ is the answer

MULTIPLICATION OF FRACTIONS

Multiply the numerators for a new numerator and the denominators for a new denominator.

Multiply $\frac{2}{3} \times \frac{3}{4} = \frac{6}{12} = \frac{1}{2}$ the answer. 3×4 is the new denominator, and 2×3 is the new numerator.

DIVISION OF FRACTIONS

Invert the terms of the divisor and proceed as in multiplication.

Inverting the divisor tells how many times the divisor is contained in one, as $\frac{3}{4}$ inverted equals $\frac{4}{3}$, the number of times $\frac{3}{4}$ is contained in 1.

RULES AND EXAMPLES FOR VARIOUS BUSINESS OPERATIONS

SUCH AS: COMMISSION, DISCOUNTS, PROFIT AND LOSS, TAXES, INSURANCE, PARTIAL PAYMENTS, ETC.

COMMISSION

To Find the Commission, the Cost or Selling Price and Per Cent of Commission Being Given

Rule.—Multiply the cost or selling price by the rate per cent of commission.

Example.—How much commission will be due an agent who buys $9,000 worth of coal on a commission of 5 per cent?

OPERATION

$9,000 = Investment or base.
.05 = Per cent of commission.
$450.00 = Commission or percentage.

Explanation.—Since the rate of commission is 5 per cent, the whole commission due the agent will be 5 per cent of the investment, $9,000, or $450.

To Find the Investment or Gross Sales, the Commission and Per Cent of Commission Being Given

Rule.—Divide the commission by the rate per cent of commission.

Example.—If an agent's rate of commission is 3 per cent, what value of goods must he sell to earn a commission of $75?

	Com.
3% = .03	$75.00
	$2,500

Explanation.—Since the agent's commission is 3 per cent, he earns 3 cents by selling $1 worth of goods; the value of the

goods sold, therefore, must be as many times $1 as 3 cents is contained times in $75, which is 2,500 times, and 2,500 times $1 is $2,500.

To Find the Investment and Commission When Both are Included in a Remittance by the Principal

Rule.—Divide the remittance by 1 plus the rate per cent of commission.

Example.—If $1,050 is sent to a Syracuse agent for the purchase of salt, how much will he invest, his rate of commission being 5 per cent?

OPERATION

$1.00 = Investment.
.05 = Commission.
$1.05 = Actual cost to principal of each dollar invested by agent.

$1.05)$1,050
$1,000, Sum invested in salt.

Explanation.—For each dollar invested the principal supplies the dollar invested and 5 cents for the agent's services, therefore the agent will invest only as many dollars in salt as $1 plus 5 cents, or $1.05, is contained times in $1,050, or 1,000 times, hence the investment $1,000.

DISCOUNTS

Discount is the allowance made from the amount of a debt, a note, or other obligation, or a deduction from the price of goods for payment before it is due.

Trade Discount is the allowance made by manufacturers and merchants upon their fixed or list prices.

When there is more than one trade discount they are known as *discount series.*

Trade discount is computed by the rules of percentage on the market price as a base. When a series of discounts is allowed, the first only is so computed, and in every subsequent discount the remainder after each preceding discount is regarded as the base.

To Find the Selling Price, the List Price and Discount Series Being Given

Example.—The list price of a carriage is $250, what is the net selling price, if a discount of 40 per cent is allowed?

OPERATION

$250 = List price.	$250 = Cost.
.40 = Per cent of discount.	100 = Discount.
$100.00 = Discount.	$150 = Net selling price.

Explanation.—Since the discount is 40 per cent and the list price or base is $250, the discount to be deducted will be 40 per cent, or $100. The net price will be $250 — $100 = $150.

True Discount

True Discount is the difference between the face of a debt due at a future time and its present worth.

The Present Worth of a debt payable at a future time without interest is its value *now;* hence is such a sum as being put at simple interest at the legal rate will amount to the given debt when it becomes due.

To Find the Present Worth and True Discount

Example.—Find the present worth and true discount of a claim for $871.68 due 2 years 3 months hence, at 6 per cent per annum.

OPERATION

$ .135 = Interest on $1 for 2 yrs. 3 mo. at 6 per cent.
1.135 = Amount.
871.58 ÷ 1.135 = $768, present worth.
871.68 — $768 = $103.68, true discount.

Explanation —The amount of the debt at the end of 2 years 3 months is $871.68, and since $1 would in that time at 6 per cent amount to $1 135, the present worth must be as many times $1 as $1.135 is contained times in $871.68, or $768. If the face is $871.68 and its present worth is only $768, the true discount will be $871.68 minus $768, or $103.68.

Rule.—Divide the amount of the debt at its maturity by one dollar plus its interest for the given time and rate and the quotient will be the present worth. Subtract the present worth from the amount and the remainder will be the true discount.

Bank Discount

Bank Discount is a deduction from the sum due upon a negotiable paper at its maturity for the cashing or buying of such paper before it becomes due.

The *discount* may be a fixed sum, but is usually the interest at the legal rate taken in advance. *Bank discount* is usually reckoned on a basis of 360 days a year.

The *time* in bank discount is always the number of days from the date of discounting to the date of maturity.

The *term of discount* is the time the note has to run after being discounted.

Notes containing an interest clause will bear interest from date to maturity unless other time be specified.

Non-Interest Bearing Notes become interest bearing if not paid at maturity.

The *maturity* of a note or draft is indicated by using a short vertical line with the date on which the note or draft is nominally due on the left and the date of maturity on the right; thus, Nov. 21—24.

To Find the Discount and Proceeds, the Face of a Note, Time and Rate Per Cent of Discount Being Given

Example.—Find the bank discount and proceeds of a note for $580 due in 63 days at 6 per cent.

OPERATION

$580.00 = Face.
6.09 = Discount for 63 days.
$573.91 = Proceeds.

Explanation.—The bank discount of a note being its interest for the time plus grace and the proceeds being the face of a note minus the bank discount, it is only necessary to compute the interest on the face for the full time to obtain the discount and to subtract such discount from the face to find the proceeds; thus, $6.09 being the discount, $580 minus $6.09 equals $573.91 proceeds.

Rule.—Compute the interest for the time and rate for the bank discount, and subtract this bank discount from the face of the note to find the proceeds.

To Find the Face of a Note, the Proceeds, Time and Rate Per Cent of Discount Being Given

Example.—What must be the face of a note, payable in 60 days, that when discounted at 6 per cent the proceeds may be $573.91?

OPERATION

$1.00 = Face of note of $1.
.0105 = Discount of note of $1.
.9895 = Proceeds of note of $1.
$573.91 ÷ .9895 = $580 face required.

Explanation.—If the discount of $1 at 6 per cent for 63 days is $.0105, the proceeds of $1 of the note would be $1 minus $.0105, or $.9895, and if the proceeds of $1 are $.9895 it would require as many dollars face of note to give $573.91 as $.9895 are contained times in $573.91, or $580.

Rule.—Divide the proceeds of a note by the proceeds of one dollar for the given rate and time.

PROFIT AND LOSS

Profit and Loss treats of gains or losses in business transactions.

The *gross* or *full* cost of an article is its first cost increased by all outlays incident to its purchase and holding to date of sale.

The Net Selling Price is the gross selling price, less all charges incident to its sale.

To Find the Profit and Loss, the Cost and Rate Being Given.

Example.—An agent paid $95 for a reaper and sold it at a profit of 18 per cent. What was his gain?

OPERATION

$95.00 = Cost.
.18 = Per cent of gain.
$17.10 = Gain.

Explanation.—Since the agent gained 18 per cent or 18 cents on $1, on the $95 of cost he would gain 95 times $.18, or $17.10.

Rule.—Multiply the cost by the rate.

To Find the Cost, the Gain or Loss and the Rate of Gain or Loss Being Given

Rule.—Divide the gain or loss by the per cent of gain or loss.

To Find the Rate of Profit or Loss, the Cost and the Profit or Loss Being Given

Rule.—Divide the profit or loss by the cost.

To Find the Cost, the Selling Price and the Rate Per Cent of Profit or Loss Being Given

Rules.—Divide the selling price by 1 plus the rate of gain.
Divide the selling price by 1 minus the rate of loss.

TAXES

To Find a Property Tax

Example.—The rate of taxation in the city of Des Moines, Iowa, is $1\frac{3}{4}$. What amount of tax must a person pay, whose personal property is valued at $17,500, and who owns real estate assessed at $24,900?

$$\begin{array}{r} \$17{,}500 \\ 24{,}900 \\ \hline \end{array}$$

$$\$42{,}400 \times .01\tfrac{3}{4} = \$742.$$

Explanation.—Since his total valuation was $42,400, and the rate of taxation $1\frac{3}{4}$ per cent, his tax would be $1\frac{3}{4}$ per cent of $42,400, or $742.

Rule.—Multiply the total assessed value by the rate per cent of taxation.

INSURANCE

To Find the Cost of Insurance

Example.—The stock in a store is insured for $750. What is the cost of insurance for one year at $1\frac{1}{2}$ per cent premium if $1.25 is charged for the policy?

OPERATION

$750 = Amount insured.
.015 = Per cent of premium.
$11.25 = Premium.
1.25 = Cost of policy.
$12.50 = Full cost of insurance.

Explanation.—Since the amount insured is the base, and the per cent of premium the rate, if the amount is multiplied by the rate the product, $11.25, will be the premium; adding $1.25, cost of policy = $12.50, the full cost.

Rule.—Multiply the amount of insurance by the rate per cent of premium, and add extra charges, if any.

To Find the Amount Insured, the Premium and Per Cent of Premium Being Given

Rule.—From the full cost of insurance subtract the extra charges, if any; divide the remainder by the per cent of premium, and the quotient will be the face of the policy.

INTEREST

Legal Points Concerning Interest

1. **Interest** is money paid for the use of money. If one borrows money promising to repay it with an additional amount, the sum borrowed is called the *principal*, the additional amount *interest*. It is usually stated as so much per cent, i.e., so many dollars of interest for every hundred dollars of principal.

2. **When Allowed.**—Interest is allowed (1) when it is expressly contracted for, (2) when such an agreement is implied, (3) when a debt has become due but remains unpaid.

The most common instance in the first class is where money is borrowed. The debtor usually expressly agrees to pay the debt and interest.

The second class is where money is borrowed and the agreement to pay interest is implied from the nature of the business or the usual custom.

The third class relates to the interest accruing after the debt becomes due, and it is a general rule that one who fails to pay money due must also pay interest upon it up to the time he does pay.

3. **Usury.**—Many of the States forbid any one to give or receive more than a stated rate of interest. This rate differs in the different States, varying from 6 to 12 per cent. The taking of a higher rate than that allowed by the law is usury; thus *usury is unlawful interest.*

4. **Legal Rate.**—Every State has established a certain rate which shall be the rate of interest in all those cases where the parties have not fixed their own rate. This is called the *legal rate*, and in most States it is 6 per cent per annum. See *Interest Laws and Statutes of Limitation.*

A promise to "pay $100 and interest" means interest at the legal rate of the State in which the payment is to be made.

5. **Penalty of Usury.**—Some penalty is inflicted upon the one who takes usury, i.e., upon the lender, not upon the borrower. It varies in the different States, but is usually one of three kinds: (1) the forfeiture of the usurious interest, i.e., all above the lawful rate; (2) the forfeiture of all the interest; or (3) the forfeiture of both principal and interest.

In a State where the first rule is adopted, the lender who has lent at an usurious rate may recover the principal and interest

at the legal rate; where the second is adopted only the money he lent; and where the third is adopted not even that. See Interest Laws.

Book Accounts.—Interest may be charged on book accounts after legal demand for payment. In Connecticut interest on book accounts is allowed only when payment is unreasonably delayed.

8. **Guardians and Trustees** may be charged interest upon all trust funds in their hands after their failure to invest them within a reasonable time.

9. **Copartnership.**—If a partner withdraws money from the funds belonging to the firm, for private use, he will be liable for interest on the same.

10. **Policy of Insurance.**—If loss occurs under a policy of insurance, it bears interest from the time it is due according to the terms of the policy.

11. **Compound** interest is not collectible by law. When interest has accumulated and become payable, an agreement that it shall be added to the principal thus formed will usually be deemed legal.

Lightning Method for Calculating Interest

This is probably the shortest and simplest method known. Multiply the principal by the number of days, and

For 4 per cent, divide by 90		For 8 per cent, divide by 45	
For 5 per cent, divide by 72		For 9 per cent, divide by 40	
For 6 per cent, divide by 60		For 10 per cent, divide by 36	
For 7 per cent, divide by 52		For 12 per cent, divide by 30	

Example.—What is the interest on $450 for 1 month and 10 days at 8 per cent?

Solution.—$450 \times 40 \div 45 = \$4.00$. Ans. Interest.

BANKERS' METHOD

To Find the Interest on Any Sum at 6 Per Cent for Any Number of Days

Rule.—Remove the decimal point two places to the left, and you have the interest for 60 days.

Example.—What is the interest on $250 for 60 days at 6 per cent? Principal, $250. Interest, $2.50.

When the time is more or less than 60 days, first find the interest for 60 days, and from that to the time required.

For 120 days, multiply by 2
" 90 " add $\frac{1}{2}$ of itself.
" 75 " " $\frac{1}{4}$ " "
" 30 " divide by 2.
" 15 " " " 4.
" 3 " " " 20.

What is the interest on $720 for 75 days at 6 per cent?

$7.20, interest for 60 days.
1.80, " " 15 "

$9.00, interest for 75 days.

Cancelation Method

Rule.—Place the principal, the rate, and the time in *months*, on the right of a vertical line, and 12 on the left; or, if the time is short and contains days, reduce to days, and place 360 on the left. After canceling equal factors on both sides of the line, the product of the remaining factors on the right, divided by the factor, if any, on the left, will give the required interest.

To find the interest of $184.80 for 1 year 5 months at 5 per cent.

OPERATION

$\$184.80^{\$15.40}$
.05
$\cancel{12}$ 17
$13.09, *Ans.*

Analysis.—$184.80 × .05 gives the interest for 1 year or 12 months, which divided by 12 gives the interest for 1 month; the quotient multiplied by 17, the number of months in 1 year 5 months, gives $13.09, the interest required.

To find the interest of $240 for 2 months 18 days at 7 per cent.

OPERATION

$\$\cancel{240}^{6}$
.07
$\cancel{360}^{3}$ 78^{26}
3 $10.92
$3.64, *Ans.*

Analysis.—$240 × .07 gives the interest for 1 year or 360 days, which divided by 360 gives the interest for 1 day; the quotient multiplied by 78, the number of days in 2 months 18 days, gives $3.64, the required interest.

To find the interest of $696 for 93 days at 1 per cent a month. Of $325.20 at $\frac{3}{4}$ per cent a month for 63 days.

OPERATION

$\$\cancel{696}^{348}$
.12
5 $\cancel{1030}^{5}$ $\cancel{93}^{31}$
5 $107.88
$21.576, *Ans.*

OPERATION

$\$\cancel{325.20}^{8.10}$
.09
$\cancel{40360}$ 63
$5.103, *Ans.*

INTEREST TABLES.

IN the following interest tables, interest is computed to mills to insure greater accuracy.

The interest at any other rate can easily be found. Interest at 4 per cent is ½ of interest at 8 per cent. Double interest at 5 per cent and you have interest at 10 per cent, etc.

The interest is given in hundreds of dollars. To find the interest on $10, $20, etc., move decimal point one place to the left. To find interest on $1, $2, etc., move decimal point two places to the left.

EXAMPLE:

FIND THE INTEREST ON $165 FOR ONE YEAR FIVE MONTHS SIXTEEN DAYS AT FIVE PER CENT.

Interest on $100 for one year	$5.00
" " 60 " " "	3.00
" " 5 " " "	.25
" " 100 " five months	2.08
" " 60 " " "	1.25
" " 5 " " "	.10
" " 100 " sixteen days	.22
" " 60 " " "	.13
" " 5 " " "	.01
Total interest	$12.04

INTEREST AT FIVE PER CENT.

Days.	$100	$200	$300	$400	$500	$600	$700	$800	$900
1	.014	.028	.042	.056	.069	.083	.097	.111	.125
2	.028	.056	.083	.111	.139	.167	.194	.222	.250
3	.042	.083	.125	167	.208	.250	.291	.333	.375
4	.056	.111	.167	.222	.278	.333	.389	.444	.500
5	.069	.139	.208	.278	.347	.417	.486	.556	.625
6	.083	.167	.250	.333	.417	.500	.583	.667	.750
7	.097	.194	.291	.389	.486	.583	.681	.778	.875
8	.111	.222	.333	.444	.556	.667	.778	.889	1.000
9	.125	.250	.375	.500	.625	.750	.875	1.000	1.125
10	.139	.278	.417	.556	.694	.833	.972	1.111	1.250
11	.153	.306	.459	.611	.764	.917	1.069	1.222	1.375
12	.167	.333	.500	.667	.833	1.000	1.167	1.333	1.500
13	.180	.361	.542	.722	.903	1.083	1.264	1.444	1.625
14	.194	.389	.583	.778	.971	1.167	1.361	1.556	1.750
15	.208	.417	.625	.833	1.041	1.250	1.458	1.667	1.875
16	.222	.444	.667	.889	1.111	1.333	1.555	1.778	2.000
17	.236	.472	.708	.944	1.180	1.417	1.653	1.889	2.125
18	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250
19	.264	.528	.792	1.056	1.319	1.583	1.847	2.111	2.375
20	.278	.556	.833	1.111	1.389	1.667	1.944	2.222	2.500
21	.291	.583	.875	1.167	1.458	1.750	2.041	2.333	2.625
22	.305	.611	.917	1.222	1.528	1.833	2.138	2.444	2.750
23	.319	.639	.959	1.278	1.597	1.917	2.236	2.556	2.875
24	.333	.667	1.000	1.333	1.667	2.000	2.333	2.667	3.000
25	.347	.694	1.042	1.389	1.736	2.083	2.430	2.778	3.125
26	.361	.722	1.083	1.444	1.805	2.167	2.528	2.889	3.250
27	.375	.750	1.125	1.500	1.875	2.250	2.625	3.000	3.375
28	.389	.778	1.167	1.556	1.944	2.333	2.722	3.111	3.500
29	.403	.806	1.208	1.611	2.014	2.417	2.820	3.222	3.625
Mos.									
1	.417	.833	1.250	1.667	2.083	2.500	2.917	3.333	3.750
2	.833	1.667	2.500	3.333	4.167	5.000	5.833	6.667	7.500
3	1.250	2.500	3.750	5.000	6.250	7.500	8.750	10.000	11.250
4	1.667	3.333	5.000	6.667	8.333	10.000	11.667	13.333	15.000
5	2.083	4.167	6.250	8.333	10.416	12.500	14.583	16.667	18.750
6	2.500	5.000	7.500	10.000	12.500	15.000	17.500	20.000	22.500
7	2.917	5.833	8.750	11.667	14.583	17.500	20.417	23.333	26.250
8	3.333	6.667	10.000	13.333	16.667	20.000	23.333	26.667	30.000
9	3.750	7.500	11.250	15.000	18.750	22.500	26.250	30.000	33.750
10	4.167	8.333	12.500	16.667	20.833	25.000	29.167	33.333	37.500
11	4.583	9.167	13.750	18.333	22.917	27.500	32.083	36.667	41.250
Year									
1	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000

INTEREST AT SIX PER CENT.

Days.	$100	$200	$300	$400	$500	$600	$700	$800	$900
1	.017	.033	.050	.067	.083	.100	.117	.133	.150
2	.033	.067	.100	.133	.167	.200	.233	.267	.300
3	.050	.100	.150	.200	.250	.300	.350	.400	.450
4	.067	.133	.200	.267	.333	.400	.467	.533	.600
5	.083	.167	.250	.333	.417	.500	.583	.667	.750
6	.100	.200	.300	.400	.500	.600	.700	.800	.900
7	.117	.233	.350	.467	.583	.700	.817	.933	1.050
8	.133	.267	.400	.533	.667	.800	.933	1.067	1.200
9	.150	.300	.450	.600	.750	.900	1.050	1.200	1.350
10	.167	.333	.500	.667	.833	1.000	1.167	1.333	1.500
11	.183	.367	.550	.733	.917	1.100	1.283	1.467	1.650
12	.200	.400	.600	.800	1.000	1.200	1.400	1.600	1.800
13	.217	.433	.650	.867	1.083	1.300	1.517	1.733	1.950
14	.233	.467	.700	.933	1.167	1.400	1.633	1.867	2.100
15	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2 250
16	.267	.533	.800	1.067	1.333	1.600	1.867	2.133	2.400
17	.283	.567	.850	1.133	1.417	1.700	1.983	2.267	2.550
18	.300	.600	.900	1.200	1.500	1.800	2.100	2.400	2.700
19	.317	.633	.950	1.267	1.583	1.900	2.217	2.533	2.850
20	.333	.667	1.000	1.333	1.667	2.000	2.333	2.667	3.000
21	.350	.700	1.050	1.400	1.750	2.100	2.450	2.800	3.150
22	.367	.733	1.100	1.467	1.833	2.200	2.567	2.933	3.300
23	.383	.767	1.150	1.533	1.917	2.300	2.683	3.067	3.450
24	.400	.800	1.200	1.600	2.000	2.400	2.800	3.200	3.600
25	.417	.833	1.250	1.667	2.083	2.500	2.917	3.333	3.750
26	.433	.867	1.300	1.733	2.167	2.600	3.033	3.467	3.900
27	.450	.900	1.350	1.800	2.250	2.700	3.150	3.600	4.050
28	.467	.933	1.400	1.867	2.333	2.800	3.267	3.733	4.200
29	.483	.967	1.450	1.933	2.417	2.900	3.383	3.867	4.350
Mos.									
1	.500	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
2	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000
3	1.500	3.000	4.500	6.000	7.500	9.000	10.500	12.000	13.500
4	2.000	4.000	6.000	8.000	10.000	12.000	14.000	16.000	18.000
5	2.500	5.000	7.500	10.000	12.500	15.000	17.500	20.000	22.500
6	3.000	6.000	9.000	12.000	15.000	18.000	21.000	24.000	27.000
7	3.500	7.000	10.500	14.000	17.500	21.000	24.500	28.000	31.500
8	4.000	8.000	12.000	16.000	20.000	24.000	28.000	32.000	36.000
9	4.500	9.000	13.500	18.000	22.500	27.000	31.500	36.000	40.500
10	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000
11	5.500	11.000	16.500	22.000	27.500	33.000	38.500	44.000	49.500
Year.									
1	6 000	12.000	18.000	24.000	30.000	36.000	42.000	48.000	54.000

INTEREST AT SEVEN PER CENT.

Days.	$100	$200	$300	$400	$500	$600	$700	$800	$900
1	.019	.039	.058	.078	.097	.117	.136	.156	.175
2	.039	.078	.117	.156	.194	.233	.272	.311	.350
3	.058	.117	.175	.233	.292	.350	.408	.467	.525
4	.078	.156	.233	.311	.389	.467	.544	.622	.700
5	.097	.194	.292	.389	.486	.583	.681	.778	.875
6	.117	.233	.350	.467	.583	.700	.817	.933	1.050
7	.136	.272	.408	.544	.681	.817	.953	1.089	1.225
8	.156	.311	.467	.622	.778	.933	1.089	1.244	1.400
9	.175	.350	.525	.700	.875	1.050	1.225	1.400	1.575
10	.194	.389	.583	.778	.972	1.167	1.361	1.556	1.750
11	.214	.428	.642	.856	1.069	1.283	1.497	1.711	1.925
12	.233	.467	.700	.933	1.167	1.400	1.633	1.867	2.100
13	.253	.506	.758	1.011	1.264	1.517	1.769	2.022	2.275
14	.272	.544	.817	1.089	1.361	1.633	1.906	2.178	2.450
15	.292	.583	.875	1.167	1.458	1.750	2.042	2.333	2.625
16	.311	.622	.933	1.244	1.556	1.867	2.178	2.489	2.800
17	.331	.661	.992	1.322	1.653	1.983	2.314	2.644	2.975
18	.350	.700	1.050	1.400	1.750	2.100	2.450	2.800	3.150
19	.369	.739	1.108	1.478	1.847	2.217	2.586	2.956	3.325
20	.389	.778	1.167	1.556	1.944	2.333	2.722	3.111	3.500
21	.408	.817	1.225	1.633	2.042	2.450	2.858	3.267	3.675
22	.428	.856	1.283	1.711	2.139	2.567	2.994	3,422	3.850
23	.447	.894	1.342	1.789	2.236	2.683	3.131	3.578	4.025
24	.467	.933	1.400	1.867	2.333	2.800	3.267	3.733	4.200
25	.486	.972	1.458	1.944	2.431	2.917	3.403	3.889	4.375
26	.506	1.011	1.517	2.022	2.528	3.033	3.539	4.044	4.550
27	.525	1.050	1.575	2.100	2.625	3.150	3.675	4.200	4.725
28	.544	1.089	1.633	2.178	2.722	3.267	3.811	4.356	4.900
29	.564	1.128	1.692	2.256	2.819	3.383	3.947	4.511	5.075
Mos.									
1	.583	1.167	1.750	2.333	2.917	3.500	4.083	4.667	5.250
2	1.167	2.333	3.500	4.667	5.833	7.000	8.167	9.333	10.500
3	1.750	3.500	5.250	7.000	8.750	10.500	12.250	14.000	15.750
4	2.333	4.667	7.000	9.333	11.667	14.000	16.333	18.667	21.000
5	2.917	5.833	8.750	11.667	14.583	17.500	20.417	23.333	26.250
6	3.500	7.000	10.500	14.000	17.500	21.000	24.500	28.000	31.500
7	4.083	8.167	12.250	16.333	20.417	24.500	28.583	32.667	36.750
8	4.667	9.333	14.000	18.667	23.333	28.000	32.667	37.333	42.000
9	5.250	10.500	15.750	21.000	26.250	31.500	36.750	42.000	47.250
10	5.833	11.667	17.500	23.333	29.167	35.000	40.833	46.667	52.500
11	6.417	12.833	19.250	25.667	32.083	38.500	44.917	51.333	57.750
Year									
1	7.000	14.000	21.000	28.000	35.000	42.000	49.000	56.000	63.000

INTEREST AT EIGHT PER CENT.

Days.	$100	$200	$300	$400	$500	$600	$700	$800	$900
1	.022	.044	.067	.089	.111	.133	.156	.178	.200
2	.044	.089	.133	.178	.222	.267	.311	.356	.400
3	.067	.133	.200	.267	.333	.400	.467	.533	.600
4	.089	.178	.267	.356	.444	.533	.622	.711	.800
5	.111	.222	.333	.444	.556	.667	.778	.889	1.000
6	.133	.267	.400	.533	.667	.800	.933	1.067	1.200
7	.156	.311	.467	.622	.778	.933	1.089	1.244	1.400
8	.178	.356	.533	.711	.889	1.067	1.244	1.422	1.600
9	.200	.400	.600	.800	1.000	1.200	1.400	1.600	1.800
10	.222	.444	.667	.889	1.111	1.333	1.556	1.778	2.000
11	.244	.489	.733	.978	1.222	1.467	1.711	1.956	2.200
12	.267	.533	.800	1.067	1.333	1.600	1.867	2.133	2.400
13	.289	.578	.867	1.156	1.444	1.733	2.022	2.311	2.600
14	.311	.622	.933	1.244	1.556	1.867	2.178	2.489	2.800
15	.333	.667	1.000	1.333	1.667	2.000	2.333	2.667	3.000
16	.356	.711	1.067	1.422	1.778	2.133	2.489	2.844	3.200
17	.378	.756	1.133	1.511	1.889	2.267	2.644	3.022	3.400
18	.400	.800	1.200	1.600	2.000	2.400	2.800	3.200	3.600
19	.422	.844	1.267	1.689	2.111	2.533	2.956	3.378	3.800
20	.444	.889	1.333	1.778	2.222	2.667	3.111	3.556	4.000
21	.467	.933	1.400	1.867	2.333	2.800	3.267	3.733	4.200
22	.489	.978	1.467	1.956	2.444	2.933	3.422	3.911	4.400
23	.511	1.022	1.533	2.044	2.556	3.067	3.578	4.089	4.600
24	.533	1.067	1.600	2.133	2.667	3.200	3.733	4.267	4.800
25	.556	1.111	1.667	2.222	2.778	3.333	3.889	4.444	5.000
26	.578	1.156	1.733	2.311	2.889	3.467	4.044	4.622	5.200
27	.600	1.200	1.800	2.400	3.000	3.600	4.200	4.800	5.400
28	.622	1.244	1.867	2.489	3.111	3.733	4.356	4.978	5.600
29	.644	1.289	1.933	2.578	3.222	3.867	4.511	5.156	5.800
Mos.									
1	.667	1.333	2.000	2.667	3.333	4.000	4.667	5.333	6.000
2	1.333	2.667	4.000	5.333	6.667	8.000	9.333	10.667	12.000
3	2.000	4.000	6.000	8.000	10.000	12.000	14.000	16.000	18.000
4	2.667	5.333	8.000	10.667	13.333	16.000	18.667	21.333	24.000
5	3.333	6.667	10.000	13.333	16.667	20.000	23.333	26.667	30.000
6	4.000	8.000	12.000	16.000	20.000	24.000	28.000	32.000	36.000
7	4.667	9.333	14 000	18.667	23.333	28.000	32.667	37.333	42.000
8	5.333	10.667	16.000	21.333	26.667	32.000	37.333	42.667	48.000
9	6.000	12.000	18.000	24.000	30.000	36.000	42.000	48.000	54.000
10	6.667	13.333	20.000	26.667	33.333	40.000	46.667	53.333	60.000
11	7.333	14.667	22.000	29.333	36.667	44.000	51.333	58.667	66.000
Year.									
1	8.000	16.000	24.000	32.000	40.000	48.000	56.000	64.000	72.000

How Money Grows at Interest

If one dollar be invested and the interest added to the principal annually, at the rates named, we shall have the following result as the accumulation of one hundred years.

One dollar, 100 years at 1 per cent	$ 2.75
One dollar, 100 years at 2 per cent	7.25
One dollar, 100 years at 3 per cent	19.25
One dollar, 100 years at 4 per cent	50.25
One dollar, 100 years at 5 per cent	131.50
One dollar, 100 years at 6 per cent	340.00
One dollar, 100 years at 7 per cent	868.00
One dollar, 100 years at 8 per cent	2,203.00

Time in which Money Doubles

Per C't.	Simple Int.	Comp. Int.	Per C't.	Simple Int.	Comp. Int.
2	50 years.	35 years.	5	20 years.	14 yrs. 75 da.
2½	40 years.	28 yrs. 26 da.	6	16 yrs. 8 mos.	11 yrs. 327 da.
3	33 yrs. 4 mos.	23 yrs. 164 da.	7	14 yrs. 104 da.	10 yrs. 89 da.
3½	28 yrs. 208 da.	20 yrs. 54 da.	8	12½-years.	9 yrs. 2 days.
4	25 years.	17 yrs. 246 da.	9	11 yrs. 40 da.	8 yrs. 16 days.
4½	22 yrs. 81 da.	15 yrs. 273 da.	10	10 years.	7 yrs. 100 da.

Table Showing Number of Days Between Two Dates

From ↓ / To ☞	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
January.	365	31	59	90	120	151	181	212	243	273	304	334
Febru'ry	334	365	28	59	89	120	150	181	212	242	273	303
March..	306	337	365	31	61	92	122	153	184	214	245	275
April...	275	306	334	365	30	61	91	122	153	183	214	244
May ...	245	276	304	335	365	31	61	92	123	153	184	214
June. ..	214	245	273	304	334	365	30	61	92	122	153	183
July ...	184	215	243	274	304	335	365	31	62	92	123	153
August.	153	184	212	243	273	304	334	365	31	61	92	122
Sept....	122	153	181	212	242	273	303	334	365	30	61	91
October.	92	123	151	182	212	243	273	304	335	365	31	61
Nov. ...	61	92	120	151	181	212	242	273	304	334	365	30
Dec. ...	31	62	90	121	151	182	212	243	274	304	335	365

For example: From any date in July to the same date in February there are 215 days. When the day of the month to which you count is LATER, add the difference; if EARLIER, subtract it. Thus, from January 1 to May 1 are 120 days; to the 11th of May it is 10 days more; while from January 11 to May 1 it is 10 days less. In Leap Years add 1 day if the last day of February is included in the given time.

Dividing the table diagonally by short horizontal lines, the numbers below show the days to a date in the year following, and numbers above to a date within the same year.

Table of Wages by the Week from $2.00 to $20.00

$2	2½	$3	3½	$4	4½	$5	Days	$7	$8	$9	10	12	15	20
.29	*.36*	*.43*	*.50*	*.57*	*.64*	*.71*	*1*	*1.00*	*1.14*	*1.29*	*1.43*	*1.71*	*2.14*	*2.86*
.08	.10	.13	.15	.17	.19	.21	¼	.29	.36	.38	.42	.50	.63	.83
.17	.21	.25	.29	.33	.38	.42	½	.58	.67	.75	.83	1.00	1.25	1.67
.25	.31	.38	.44	.50	.56	.63	¾	.88	1.00	1.13	1.25	1.50	1.88	2.50
.33	.42	.50	.58	.67	.75	.83	1	1.17	1.33	1.50	1.67	2.00	2.50	3.33
.50	.63	.75	.88	1.00	1.13	1.25	1½	1.75	2.00	2.25	2.50	3.00	3.75	5.00
.67	.83	1.00	1.17	1.33	1.50	1.67	2	2.33	2.67	3.00	3.33	4.00	5.00	6.67
.83	1.04	1.25	1.46	1.67	1.88	2.08	2½	2.92	3.33	3.75	4.17	5.00	6.25	8.33
1.00	1.25	1.50	1.75	2.00	2.25	2.50	3	3.50	4.00	4.50	5.00	6.00	7.50	10.00
1.17	1.46	1.75	2.04	2.33	2.63	2.92	3½	4.08	4.67	5.25	5 83	7.00	8.75	11.67
1.33	1.67	2.00	2.33	2.67	3.00	3.33	4	4.67	5.33	6.00	6 67	8.00	10.00	13.33
1.50	1.88	2.25	2.63	3.00	3.38	3.75	4½	5.25	6.00	6.75	7.50	9.00	11.25	15.00
1.67	2.08	2.50	2.92	3.33	3.75	4.17	5	5.83	6.67	7.50	8.33	10.00	12.50	16.67
1.83	2 29	2.75	3.21	3.67	4.13	4.58	5½	6.42	7.33	8.25	9.17	11.00	13.75	18.33
2.00	2.50	3.00	3.50	4.00	4.50	5.00	6	7.00	8.00	9.00	10.00	12.00	15.00	20.00

EXPLANATIONS.—The rate per Week will be found in the top lines, and the Time, in the middle columns. For example, at $7 per week, the wages for 4½ days will amount to $5.25.

The third line (in *italic* figures) shows the wages for one day, at the rate of counting *seven* working days a week.

Table of WAGES by the DAY. The 10 Hour System.

$1	1¼	1½	1¾	$2	2¼	2½	Hours	2¾	$3	3¼	3½	$4	4½	$5
.10	.13	.15	.18	.20	.23	.25	1	.28	.30	.33	.35	.40	.45	.50
.20	.25	.30	.35	.40	.45	.50	2	.55	.60	.65	.70	.80	.90	1.00
.30	.38	.45	.53	.60	.68	.75	3	.83	.90	.98	1.05	1.20	1.35	1.50
.40	.50	.60	.70	.80	.90	1.00	4	1.10	1.20	1.30	1.40	1.60	1.80	2.00
.50	.63	.75	.88	1.00	1.13	1.25	5	1.38	1.50	1.63	1.75	2.00	2.25	2.50
.60	.75	.90	1.05	1.20	1.35	1.50	6	1.65	1.80	1.95	2.10	2.40	2.70	3.00
.70	.88	1.05	1.23	1.40	1 58	1.75	7	1.93	2.10	2.28	2.45	2.80	3.15	3.50
.80	1.00	1.20	1.40	1.60	1.80	2.00	8	2.20	2.40	2.60	2.80	3.20	3.60	4.00
.90	1.13	1.35	1.58	1.80	2.03	2.25	9	2.48	2.70	2.93	3.15	3.60	4.05	4.50
1.00	1 25	1.50	1.75	2.00	2.25	2.50	10	2.75	3.00	3.25	3.50	4.00	4.50	5.00

Table of WAGES by the DAY. The 8 Hour System.

$1	1¼	1½	1¾	$2	2¼	2½	Hours	2¾	$3	3¼	3½	$4	4½	$5
.13	.16	.19	.22	.25	.28	.31	1	.34	.38	.41	.44	.50	.56	.63
.25	.31	.38	.44	.50	.56	.63	2	.69	.75	.81	.88	1.00	1.13	1.25
.38	.47	.56	.66	.75	.84	.94	3	1.03	1.13	1.22	1.31	1.50	1.69	1.88
.50	.63	.75	.88	1.00	1.13	1.25	4	1.38	1.50	1.63	1.75	2.00	2.25	2.50
.63	.78	.94	1.09	1.25	1.41	1.56	5	1.72	1.88	2.03	2.19	2.50	2.81	3.13
.75	.94	1.13	1.31	1.50	1.69	1.88	6	2.06	2 25	2.44	2.63	3.00	3.38	3.75
.88	1.09	1.31	1 53	1.75	1.97	2.19	7	2.41	2.63	2.84	3 06	3 50	3.94	4.38
1.00	1.25	1.50	1.75	2.00	2.25	2.50	8	2.75	3.00	3.25	3.50	4.00	4 50	5.00

At the rate of $2.25 per day, 4 hours' wages, by the *ten* hour system, will come to 90 cts.; and by the *eight* hour system, to $1.13

Table of Board or Rent, by the Week, showing it for Days.

.25	.50	.75	$1	$2	$3	$4	$5	Days	$6	$8	$9	10	11	12	15
.02	04	.05	.07	.14	.21	.29	.36	¼	.43	.57	.64	.71	.79	.86	1 07
.04	.07	.11	.14	.29	.43	.57	.71	1	.86	1.14	1.29	1.43	1.57	1.71	2.14
.07	.14	.20	.29	.57	.86	1.14	1.43	2	1.71	2.29	2.57	2.86	3.14	3.43	4.29
.11	.21	.32	.43	.86	1.29	1.71	2.14	3	2.57	3.43	3.86	4.29	4.71	5.14	6.43
.14	.29	.43	.57	1.14	1.71	2.29	2.86	4	3.43	4.57	5.14	5.71	6.29	6.86	8.57
.18	.36	.54	.71	1.43	2.14	2.86	3.57	5	4.29	5.71	6.43	7.14	7.86	8.57	10.71
.21	.43	.64	.86	1.71	2.57	3.43	4.29	6	5.14	6.86	7.71	8.57	9.43	10.29	12.86
.25	.50	.75	1.00	2.00	3.00	4.00	5.00	7	6.00	8.00	9.00	10.00	11.00	12.00	15 00

One day's board or rent, at $4 per week, comes to 57 cts.; at $4.50, to 7 cts more.

Table of Wages by the Month from $9.00 to $75.00

$9	10	11	12	13	14	Days	15	16	17	18	19	20
.30	.33	.37	.40	.43	.47	1	.50	.53	.57	.60	.63	.67
.35	.38	.42	.46	.50	.54	1	.58	.62	.65	.69	.73	.77
.69	.77	.85	.92	1.00	1.08	2	1.15	1.23	1.31	1.38	1.46	1.54
1.04	1.15	1.27	1.38	1.50	1.62	3	1.73	1.85	1.96	2.08	2.19	2.31
1.38	1.54	1.69	1.85	2.00	2.15	4	2.31	2.46	2.62	2.77	2.92	3.08
1.73	1.92	2.12	2.31	2.50	2.69	5	2.88	3.08	3.27	3.46	3.65	3.85
2.08	2.31	2.54	2.77	3.00	3.23	6	3.46	3.69	3.92	4.15	4.38	4.62
2.42	2.69	2.96	3.23	3.50	3.77	7	4.04	4.31	4.58	4.85	5.12	5.38
2.77	3.08	3.38	3.69	4.00	4.31	8	4.62	4.92	5.23	5.54	5.85	6.15
3.12	3.46	3.81	4.15	4.50	4.85	9	5.19	5.54	5.88	6.23	6.58	6.92
3.46	3.85	4.23	4.62	5.00	5.38	10	5.77	6.15	6.54	6.92	7.31	7.69
3.81	4.23	4.65	5.08	5.50	5.92	11	6.35	6.77	7.19	7.62	8.04	8.46
4.15	4.62	5.08	5.54	6.00	6.46	12	6.92	7.38	7.85	8.31	8.77	9.23
4.50	5.00	5.50	6.00	6.50	7.00	13	7.50	8.00	8.50	9.00	9.50	10.00
4.85	5.38	5.92	6.46	7.00	7.54	14	8.08	8.62	9.15	9.69	10.23	10.77
5.19	5.77	6.35	6.92	7.50	8.08	15	8.65	9.23	9.81	10.38	10.96	11.54
5.54	6.15	6.77	7.38	8.00	8.62	16	9.23	9.85	10.46	11.08	11.69	12.31
5.88	6.54	7.19	7.85	8.50	9.15	17	9.81	10.46	11.12	11.77	12.42	13.08
6.23	6.92	7.62	8.31	9.00	9.69	18	10.38	11.08	11.77	12.46	13.15	13.85
6.58	7.31	8.04	8.77	9.50	10.23	19	10.96	11.69	12.42	13.15	13.88	14.62
6.92	7.69	8.46	9.23	10.00	10.77	20	11.54	12.31	13.08	13.85	14.62	15.38
7.27	8.08	8.88	9.69	10.50	11.31	21	12.12	12.92	13.73	14.54	15.35	16.15
7.62	8.46	9.31	10.15	11.00	11.85	22	12.69	13.54	14.38	15.23	16.08	16.92
7.96	8.85	9.73	10.62	11.50	12.38	23	13.27	14.15	15.04	15.92	16.81	17.69
8.31	9.23	10.15	11.08	12.00	12.92	24	13.85	14.77	15.69	16.62	17.54	18.46
8.65	9.62	10.58	11.54	12.50	13.46	25	14.42	15.38	16.35	17.31	18.27	19.23
9.00	10.00	11.00	12.00	13.00	14.00	26	15.00	16.00	17.00	18.00	19.00	20.00

showing the Amount for 1 Day, up to 26 (working) Days.

21	22	23	24	25	30	Days	35	40	45	50	60	75
.70	.73	.77	.80	.83	1.00	1	1.17	1.33	1.50	1.67	2.00	2.50
.81	.85	.88	.92	.96	1.15	1	1.35	1.54	1.73	1.92	2.31	2.88
1.62	1.69	1.77	1.85	1.92	2.31	2	2.69	3.08	3.46	3.85	4.62	5.77
2.42	2.54	2.65	2.77	2.88	3.46	3	4.04	4.62	5.19	5.77	6.92	8.65
3.23	3.38	3.54	3.69	3.85	4.62	4	5.38	6.15	6.92	7.69	9.23	11.54
4.04	4.23	4.42	4.62	4.81	5.77	5	6.73	7.69	8.65	9.62	11.54	14.42
4.85	5.08	5.31	5.54	5.77	6.92	6	8.08	9.23	10.38	11.54	13.85	17.31
5.65	5.92	6.19	6.46	6.73	8.08	7	9.42	10.77	12.12	13.46	16.15	20.19
6.46	6.77	7.08	7.38	7.69	9.23	8	10.77	12.31	13.85	15.38	18.46	23.08
7.27	7.62	7.96	8.31	8.65	10.38	9	12.12	13.85	15.58	17.31	20.77	25.96
8.08	8.46	8.85	9.23	9.62	11.54	10	13.46	15.38	17.31	19.23	23.08	28.85
8.88	9.31	9.73	10.15	10.58	12.69	11	14.81	16.92	19.04	21.15	25.38	31.73
9.69	10.15	10.62	11.08	11.54	13.85	12	16.15	18.46	20.77	23.08	27.69	34.62
10.50	11.00	11.50	12.00	12.50	15.00	13	17.50	20.00	22.50	25.00	30.00	37.50
11.31	11.85	12.38	12.92	13.46	16.15	14	18.85	21.54	24.23	26.92	32.31	40.38
12.12	12.69	13.27	13.85	14.42	17.31	15	20.19	23.08	25.96	28.85	34.62	43.27
12.92	13.54	14.15	14.77	15.38	18.46	16	21.54	24.62	27.69	30.77	36.92	46.15
13.73	14.38	15.04	15.69	16.35	19.62	17	22.88	26.15	29.42	32.69	39.23	49.04
14.54	15.23	15.92	16.62	17.31	20.77	18	24.23	27.69	31.15	34.62	41.54	51.92
15.35	16.08	16.81	17.54	18.27	21.92	19	25.58	29.23	32.88	36.54	43.85	54.81
16.15	16.92	17.69	18.46	19.23	23.08	20	26.92	30.77	34.62	38.46	46.15	57.69
16.96	17.77	18.58	19.38	20.19	24.23	21	28.27	32.31	36.35	40.38	48.46	60.58
17.77	18.62	19.46	20.31	21.15	25.38	22	29.62	33.85	38.08	42.31	50.77	63.46
18.58	19.46	20.35	21.23	22.12	26.54	23	30.96	35.38	39.81	44.23	53.08	66.35
19.38	20.31	21.23	22.15	23.08	27.69	24	32.31	36.92	41.54	46.15	55.38	69.23
20.19	21.15	22.12	23.08	24.04	28.85	25	33.65	38.46	43.27	48.08	57.69	72.12
21.00	22.00	23.00	24.00	25.00	30.00	26	35.00	40.00	45.00	50.00	60.00	75.00

The center column shows the days and the black face figures at the top show rate per month. Example—21 days' work at $30 per month; find it under 30, opposite 21. Answer, $24.23.

READY RECKONER.

READY RECKONER, to find the Price of any Number of Pounds, Yards Pieces, or Bushels, from 2 cents to $3.00.

The first column contains the NUMBER, the top columns the PRICES.

Nos	2 ct.	3 ct.	4 ct.	5 ct.	6 ct.	6¼ ct.	7 ct.	8 ct.	9 ct.	10 ct.	11 ct.
2	.4	.6	.8	.10	.12	.12½	.14	.16	.18	.20	.22
3	.6	.9	.12	.15	.18	.18¾	.21	.24	.27	.30	.33
4	.8	.12	.16	.20	.24	.25	.28	.32	.36	.40	.44
5	.10	.15	.20	.25	.30	.31¼	.35	.40	.45	.50	.55
6	.12	.18	.24	.30	.36	.37½	.42	.48	.54	.60	.66
7	.14	.21	.28	.35	.42	.43¾	.49	.56	.63	.70	.77
8	.16	.24	.32	.40	.48	.50	.56	.64	.72	.80	.88
9	.18	.27	.36	.45	.54	.56¼	.63	.72	.81	.90	.99
10	.20	.30	.40	.50	.60	.62½	.70	.80	.90	1.00	1.10
11	.22	.33	.44	.55	.66	.68¾	.77	.88	.99	1.10	1.21
12	.24	.36	.48	.60	.72	.75	.84	.96	1.08	1.20	1.32
13	.26	.39	.52	.65	.78	.81¼	.91	1.04	1.17	1.30	1.43
14	.28	.42	.56	.70	.84	.87½	.98	1.12	1.26	1.40	1.54
15	.30	.45	.60	.75	.90	.93¾	1.05	1.20	1.35	1.50	1.65
16	.32	.48	.64	.80	.96	1.00	1.12	1.28	1.44	1.60	1.76
17	.34	.51	.68	.85	1.02	1.06¼	1.19	1.36	1.53	1.70	1.87
18	.36	.54	.72	.90	1.08	1.12½	1.26	1.44	1.62	1.80	1.98
19	.38	.57	.76	.95	1.14	1.18¾	1.33	1.52	1.71	1.90	2.09
20	.40	.60	.80	1.00	1.20	1.25	1.40	1.60	1.80	2.00	2.20
25	.50	.75	1.00	1.25	1.50	1.56¼	1.75	2.00	2.25	2.50	2. 5
30	.60	.90	1.20	1.50	1.80	1.87½	2.10	2.40	2.70	3.00	3.30
40	.80	1.20	1.60	2.00	2.40	2.50	2.80	3.20	3.60	4.00	4.40
50	1.00	1.50	2.00	2.50	3.00	3.12½	3.50	4.00	4.50	5.00	5.50
60	1.20	1.80	2.40	3.00	3 60	3.75	4.20	4.80	5.40	6.00	6.60
70	1.40	2.10	2.80	3.50	4.20	4.37½	4.90	5.60	6.30	7.00	7.70
80	1.60	2.40	3.20	4.00	4.80	5.00	5.60	6.40	7.20	8.00	8.80
90	1.80	2.70	3.60	4.50	5.40	5.62½	6.30	7.20	8.10	9.00	9.90
100	2.00	3.00	4.00	5.00	6.00	6.25	7.00	8.00	9.00	10.00	11.00

Nos	12 ct.	12½ct.	13ct.	14 ct.	15 ct.	16 ct.	18 ct.	18¾ct.	19 ct.	20 ct.	21 ct.
2	.24	.25	.26	.28	.30	.32	.36	.37½	.38	.40	.42
3	.36	.37½	.39	.42	.45	.48	.54	.56¼	.57	.60	.63
4	.48	.50	.52	.56	.60	.64	.72	.75	.76	.80	.84
5	.60	.62½	.65	.70	.75	.80	.90	.93¾	.95	1.00	1.05
6	.72	.75	.78	.84	.90	.96	1.08	1.12½	1.14	1.20	1.26
7	.84	.87½	.91	.98	1.05	1.12	1.26	1.31¼	1.33	1.40	1.47
8	.96	1.00	1.04	1.12	1.20	1.28	1.44	1.50	1.52	1.60	1.68
9	1.08	1.12½	1.17	1.26	1.35	1.44	1.62	1.68¾	1.71	1.80	1.89
10	1.20	1.25	1.30	1.40	1.50	1.60	1.80	1.87½	1.90	2.00	2.10
11	1.32	1.37½	1.43	1.54	1.65	1.76	1.98	2.06¼	2.09	2.20	2.31
12	1.44	1.50	1.56	1.68	1.80	1.92	2.16	2.25	2.28	2.40	2.52
13	1.56	1.62½	1.69	1.82	1.95	2.08	2.34	2.43¾	2.47	2.60	2.73
14	1.68	1.75	1.82	1.96	2.10	2.24	2.52	2.62½	2.66	2.80	2.94
15	1.80	1.87½	1.95	2.10	2.25	2.40	2.70	2.81¼	2.85	3.00	3.15
16	1.92	2.00	2.08	2.24	2.40	2.56	2.88	3.00	3.04	3.20	3.36
17	2.04	2.12½	2.21	2.38	2.55	2.72	3.06	3.18¾	3.23	3.40	3.57
18	2.16	2.25	2.34	2.52	2.70	2.88	3.24	3.37½	3.42	3.60	3.78
19	2.28	2.37½	2.47	2.66	2.85	3.04	3.42	3.56¼	3.61	3.80	3.99
20	2.40	2.50	2.60	2.80	3.00	3.20	3.60	3.75	3.80	4.00	4.20
25	3.00	3.12½	3.25	3.50	3.75	4.00	4.50	4.68¾	4.75	5.00	5.25
30	3.60	3.75	3.90	4.20	4.50	4.80	5.40	5.62½	5.70	6.00	6.30
40	4.80	5.00	5.20	5.60	6.00	6.40	7.20	7.50	7.60	8.00	8.40
50	6.00	6.25	6.50	7 00	7.50	8.00	9.00	9.37½	9.50	10.00	10.50
60	7.20	7.50	7.80	8.40	9.00	9 60	10.80	11.25	11.40	12.00	12.60
70	8.40	8.75	9.10	9.80	10.50	11.20	12.60	13.12½	13.30	14.00	14.70
80	9.60	10.00	10.40	11.20	12.00	12.80	14.40	15.00	15.20	16.00	16.80
90	10.80	11.25	11.70	12.60	13.50	14.40	16.20	16.87½	17.10	18.00	18.90
100	12.00	12.50	13.00	14.00	15.00	16.00	18.00	18.75	19.00	20.00	21.00

READY RECKONER.

The first column on the left contains the NUMBER of the Article, and the column on the tops of the tables the PRICE.

Nos	22 ct.	23ct.	24 ct.	25 ct.	26 ct.	27 ct.	28 ct.	29 ct.	30 ct.	31 ct.	31¼ct.
2	.44	.46	.48	.50	.52	.54	.56	.58	.60	.62	.62½
3	.66	.69	.72	.75	.78	.81	.84	.87	.90	.93	.93¾
4	.88	.92	.96	1.00	1.04	1.08	1.12	1.16	1.20	1.24	1.25
5	1.10	1.15	1.20	1.25	1.30	1.35	1.40	1.45	1.50	1.55	1.56¼
6	1.32	1.38	1.44	1.50	1.56	1.62	1.68	1.74	1.80	1.86	1.87½
7	1.54	1.61	1.68	1.75	1.82	1.89	1.96	2.03	2.10	2.17	2.18¾
8	1.76	1.84	1.92	2.00	2.08	2.16	2.24	2.32	2.40	2.48	2.50
9	1.98	2.07	2.16	2.25	2.34	2.43	2.52	2.61	2.70	2.79	2.81¼
10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	3.00	3.10	3.12½
11	2.42	2.53	2.64	2.75	2.86	2.97	3.08	3.19	3.30	3.41	3.43¾
12	2.64	2.76	2.88	3.00	3.12	3.24	3.36	3.48	3.60	3.72	3 75
13	2.86	2.99	3.12	3.25	3.38	3.51	3.64	3.77	3.90	4.03	4.06¼
14	3.08	3.22	3.36	3.50	3.64	3.78	3.92	4.06	4.20	4.34	4.37½
15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	4.50	4.55	4.68¾
16	3.52	3.68	3.84	4.00	4.16	4.32	4.48	4.64	4.80	4.96	5.00
17	3.74	3.91	4.08	4.25	4.42	4.59	4.76	4.93	5.10	5.27	5.31¼
18	3.96	4.14	4.32	4.50	4.68	4.86	5.04	5.22	5.40	5.58	5.62½
19	4.18	4.37	4.56	4.75	4.94	5.15	5.32	5.51	5.70	5.89	5.93¾
20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.25
25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.25	7.75	7.81¼
30	6.60	6.90	7.20	7.50	7.80	8.10	8.40	8.70	9.00	9.30	9.37½
40	8.80	9.20	9.60	10.00	10.40	10.80	11.20	11.60	12.00	12.40	12.50
50	11.00	11.50	12.00	12.50	13.00	13.50	14.00	14.50	15.00	15 50	15.62½
60	13.20	13.80	14.40	15.00	15.60	16.20	16.80	17.40	18.00	18 60	18.75
70	15.40	16.10	16.80	17.50	18.20	18.90	19.60	20.30	21.00	21.70	21.87½
80	17.60	18.40	19.20	20.00	20.80	21.60	22.40	23.20	24.00	24.80	25.00
90	19.80	20.70	21.60	22.50	23.40	24.30	25.20	26.10	27.00	27.90	28.12½
100	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	31.25

Nos	32 ct.	33ct	33⅓ct.	34 ct	35 ct	36 ct.	37 ct.	37½ct.	38 ct.	39 ct.	40 ct.
2	.64	.66	.66⅔	.68	.70	.72	.74	.75	.76	.78	.80
3	.96	.99	1.00	1.02	1.05	1.08	1.11	1.12½	1.14	1.17	1.20
4	1.28	1.32	1.33⅓	1.36	1.40	1.44	1.48	1.50	1.52	1.56	1.60
5	1.60	1.65	1.66⅔	1.70	1.75	1 80	1.85	1.87½	1.90	1.95	2.00
6	1.92	1.98	2.00	2.04	2.10	2.16	2.22	2.25	2.28	2.34	2.40
7	2.24	2.31	2.33⅓	2.38	2.45	2.52	2.59	2.62½	2.66	2.73	2.80
8	2.56	2.64	2.66⅔	2.72	2.80	2.88	2.96	3.00	3.04	3.12	3.20
9	2.88	2.97	3.00	3.06	3.15	3.24	3.33	3.37½	3.42	3.51	3.60
10	3.20	3.30	3.33⅓	3.40	3.50	3.60	3.70	3.75	3.80	3.90	4.00
11	3.52	3.63	3.66⅔	3.74	3.85	3.96	4.07	4.12½	4.18	4.29	4.40
12	3.84	3.96	4.00	4.08	4.20	4.32	4.44	4.50	4.56	4.68	4.80
13	4.16	4.29	4.33⅓	4.42	4.55	4.68	4.81	4.87½	4.94	5.07	5.20
14	4.48	4.62	4.66⅔	4.76	4.90	5.04	5.18	5.25	5.32	5.46	5.60
15	4.80	4.95	5.00	5.10	5.25	5.40	5.55	5.62½	5.70	5.85	6.00
16	5.12	5.28	5.33⅓	5.44	5.60	5.76	5.92	6.00	6.08	6.24	6.40
17	5.44	5.61	5.66⅔	5.78	5.95	6.12	6.29	6.37½	6.46	6.63	6.80
18	5.76	5.94	6.00	6.12	6.30	6.48	6.66	6.75	6.84	7.02	7.20
19	6.08	6.27	6.33⅓	6.46	6.65	6.84	7.03	7.12½	7.22	7.41	7.60
20	6.40	6.60	6.66⅔	6.80	7.00	7.20	7.40	7.50	7.60	7.80	8.00
25	8.00	8.25	8.33⅓	8.50	8.75	9.00	9.25	9.37½	9.50	9.75	10.00
30	9.60	9.90	10.00	10.20	10.50	10.80	11.10	11.25	11.40	11.70	12.00
40	13.80	12.20	13.33⅓	13.60	14.00	14.40	14.80	15.00	15.20	15.60	16.00
50	16.00	16.50	16.66⅔	17.00	17.50	18.00	18.50	18.75	19.00	19.50	20.00
60	19.20	19.80	20.00	20.40	21.00	21.60	22.20	22.50	22.80	23.40	24.00
70	22.40	23.10	23.33⅓	23.80	24.50	25.20	25.90	26.25	26.60	27.30	28.00
80	25.60	26 40	26.66⅔	27.20	28.00	28.80	29.60	30.00	30.40	31.20	32.00
90	28.80	29.70	30.00	30.60	31.50	32.40	33.30	33.75	34.20	35.10	36.00
100	32.00	33.00	33.33⅓	34.00	35.00	36.00	37.00	37.50	38.00	39.00	40.00

READY RECKONER

The first column on the left contains the NUMBER of the Article, and the column on the tops of the Tables the PRICE.

Nos	41 ct.	42 ct.	43 ct.	44 ct.	45 ct.	46 ct.	47 ct.	48 ct.	49 ct.	50 ct.	51 ct.
2	.82	.84	.86	.88	.90	.92	.94	.96	98	1.00	1.02
3	1.23	1.26	1.29	1.32	1.35	1.38	1.41	1.44	1.47	1.50	1.53
4	1.64	1.68	1.72	1.76	1.80	1.84	1.88	1.92	1.96	2 00	2.04
5	2.05	2.10	2.15	2.20	2.25	2.30	2.35	2.40	2.45	2.50	2.55
6	2.46	2.52	2.58	2.64	2.70	2.76	2.80	2.88	2.94	3 00	3.06
7	2.87	2.94	3.01	3.08	3.15	3.22	3.29	3.36	3.43	3.50	3.57
8	3.28	3.36	3.44	3.52	3.60	3.68	3.76	3.84	3.92	4.00	4.08
9	3.69	3.78	3.87	3.96	4.05	4.14	4.23	4.32	4.41	4.50	4.59
10	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	5.00	5.10
11	4.51	4.62	4.73	4.84	4.95	5.06	5.17	5.28	5.39	5.50	5.61
12	4.92	5.04	5.16	5.28	5.40	5.72	5.64	5.76	5.88	6.00	6.12
13	5.33	5.46	5.59	5.72	5.85	5.98	6.11	6.24	6.37	6.50	6 63
14	5.74	5.88	6.02	6.16	6.30	6.44	6.58	6.72	6.86	7.00	7.14
15	6.15	6.30	6.45	6.60	6 75	6.90	7.05	7.20	7.35	7.50	7.65
16	6.56	6.72	6.88	7.04	7.20	7.36	7.52	7.68	7.84	8.00	8.16
17	6.97	7.14	7.31	7.48	7.65	7.82	7.99	8.16	8.33	8.50	8.67
18	7.38	7.56	7.74	7.92	8.10	8,28	8.46	8.64	8.82	9.00	9.18
19	7.79	7.98	8.17	8.30	8.55	8.74	8.93	9.12	9.31	9.50	9.69
20	8.20	8.40	8.60	8.80	9.00	9.20	9.40	9.60	9.80	10.00	10.20
25	10.25	10.50	10,75	11.00	11.25	11.50	11.75	12.00	12.25	12.50	12.75
30	12.30	12.60	12.90	13.20	13.50	13.80	14.10	14.40	14.70	15.00	15.30
40	16.40	16.80	17.20	17.60	18.00	18.40	18.80	19.20	19.60	20.00	20.40
50	20.50	21.00	21.50	22.00	22.50	23.00	23.50	24.00	24.50	25.00	25.50
60	24.60	25.20	25.80	26.40	27.00	27.60	28.20	28.80	29.40	30.00	30.60
70	28.70	29.40	30.10	30.80	31.50	32.20	32.90	33.00	34.30	35.00	35.70
80	32.80	33.60	34 40	35.20	36.00	36.80	37.60	38.40	39.20	40.00	40.80
90	36.90	37.80	38.70	39.60	40.50	41.40	42.30	43.20	44.10	45.00	45.92
100	41.00	42.00	43.00	44.00	45.00	46.00	47.00	48.00	49.00	50.00	51.00

Nos	52 ct.	53 ct.	54 ct.	55 ct.	56 ct.	57 ct.	58 ct.	59 ct.	60 ct.	61 ct.	62 ct.
2	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.24
3	1.56	1.59	1.62	1.65	1.68	1.71	1.74	1.77	1.80	1.83	1.86
4	2.08	2.12	2.16	2.20	2.24	2.28	2.32	2.36	2.40	2.44	2.48
5	2.60	2.65	2.70	2.75	2.80	2.85	2.90	2.95	3.00	3.05	3.10
6	3.12	3.18	3.24	3.30	3.36	3.42	3.48	3.54	3.60	3.66	3.72
7	3.64	3.71	3.78	3.85	3.92	3.99	4.06	4.13	4.20	4.27	4.34
8	4.16	4.24	4.32	4.40	4.48	4.56	4.64	4.72	4.80	4.88	4.96
9	4.68	4.77	4.86	4.95	5.04	5.13	5.22	5.31	5.40	5.49	5.58
10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	6.00	6.10	6.20
11	5.72	5.83	5.94	6.05	6.16	6.27	6.38	6.49	6.60	6.71	6.82
12	6.24	6.36	6.48	6.60	6.72	6.84	6.96	7.08	7.20	7.32	7.44
13	6.76	6.89	7.02	7.15	7.28	7.41	7.54	7.67	7.80	7.93	8.06
14	7.28	7.42	7.56	7.70	7.84	7.98	8.12	8.26	8.40	8.54	8.68
15	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	9.00	9.15	9.30
16	8.32	8.48	8.64	8.80	8.96	9.12	9.28	9.44	9.60	9.76	9.92
17	8.84	9.01	9.18	9.35	9.52	9.69	9.86	10.03	10.20	10.37	10.54
18	9.36	9.54	9.72	9.90	10.08	10.26	10.44	10.62	10 80	10.98	11.16
19	9.88	10.07	10.26	10.45	10.64	10.83	11.02	11.21	11.40	11.59	11.78
20	10.40	10.60	10.80	11.00	11.20	11 40	11.60	11.80	12.00	12.20	12.40
25	13.00	13.25	13.50	13.75	14.00	14.25	14.50	14.75	15.00	15.25	15.50
30	15.60	15.90	16.20	16.50	16.80	17.10	17.40	17.70	18.00	18.30	18.60
40	20.80	21.10	21.60	22.00	22.40	22.80	23.20	23.60	24.00	24.42	24.80
50	26.00	26.50	27.00	27 50	28 00	28.50	29.00	29.50	30.00	30.50	31.00
60	31.20	31.80	32.40	33.00	33.60	34.20	34.80	35.40	36.00	36.60	37.20
70	36.40	37.10	37.80	38.50	39.20	39.90	40.60	41.30	42.00	42.70	43.40
80	41.60	42.40	43.20	44.00	44.80	45.60	46.40	47 20	48.00	48.80	49.60
90	46.80	47.70	48.60	49.50	50.40	51.30	52.20	53.10	54.00	54.90	55.80
100	52.00	53.00	54.00	55.00	56.00	57 00	58.00	59.00	60.00	61.00	62.00

READY RECKONER.

If the Number required is not found in the Tables, add two Numbers together; for instance, if 35 bushels are required, add the prices opposite 30 and 5 together; and so for 365 bushels—treble the value of 100, and add 60 and 5 together.

Nos	62½ct.	63 ct.	64ct.	65 ct.	66 ct.	66⅔ct.	67 ct.	68 ct.	69 ct.	70 ct.	71 ct.
2	1.25	1.26	1.28	1.30	1.32	1.33⅓	1.34	1.36	1.38	1.40	1.42
3	1.87½	1.89	1.92	1.95	1.98	2.00	2.01	2.04	2.07	2.10	2.13
4	2.50	2.52	2.56	2.60	2.64	2.66⅔	2.68	2.72	2.76	2.80	2.84
5	3.12½	3.15	3.20	3.25	3.30	3.33⅓	3.35	3.40	3.45	3.50	3.55
6	3.75	3.78	3.84	3.90	3.96	4.00	4.02	4.08	4.14	4.20	4.26
7	4.37½	4.41	4.48	4.55	4.62	4.66⅔	4.69	4.76	4.83	4.90	4.97
8	5.00	5.04	5.12	5.20	5.28	5.33⅓	5.36	5.44	5.52	5.60	5 68
9	5.62½	5.67	5.76	5.85	5.94	6.00	6.03	6.12	6.21	6.30	6.39
10	6.25	6.30	6.40	6.50	6.60	6.66⅔	6.70	6.80	6.90	7.00	7.10
11	6.87½	6.93	7.04	7.15	7.26	7.33⅓	7.37	7.48	7.59	7.70	7.81
12	7.50	7.56	7.68	7.80	7.92	8.00	8.04	8.16	8.28	8.40	8.52
13	8.12½	8.19	8.32	8.45	8.58	8.66⅔	8.71	8.84	8.97	9.10	9.23
14	8.75	8.80	8.96	9.10	9.24	9.33⅓	9.38	9.52	9. 66	9.80	9.94
15	9.37½	9.45	9.60	9.75	9.90	10.00	10.05	10.20	10.35	10.50	10.65
16	10.00	10.08	10.24	10.40	10.56	10.66⅔	10.72	10.88	11.04	11.20	11.36
17	10.62½	10.71	10.88	11.05	11.22	11.33⅓	11.39	11.56	11.73	11.90	12.07
18	11.25	11.34	11.52	11.70	11.88	12.00	12.06	12.24	12.42	12.60	12.78
19	11.87½	11.97	12.16	12.35	12.54	12.66⅔	12.73	12.92	13.11	13.30	13.49
20	12.50	12.60	12.80	13.00	13.20	13.33⅓	13.40	13.60	13.80	14.00	14.20
25	15.62½	15.75	16.00	16.25	16.50	16.66⅔	16.75	17.00	17.25	17.50	17.75
30	18.75	18.90	19.20	19.50	19.80	20.00	20.10	20.40	20.70	21.00	21.30
40	25.00	25.20	25.60	26.00	26.40	26.66⅔	26.80	27.20	27.60	28.00	28.40
50	31.25	31.50	32.00	32.50	33.00	33.33⅓	33.50	34.00	34.50	35.00	35.50
60	37.50	37.80	38.40	39.00	39.60	40.00	40.20	40.80	41.40	42.00	42.60
70	43.75	44.10	44.80	45.50	46.20	46.66⅔	46.90	47.60	48.30	49.00	49.70
80	50.00	50.40	51.20	52.00	52.80	53.33⅓	53.00	54.40	55.20	56.00	56.80
90	51.25	56.70	57.60	58.50	59.40	60.00	60.30	61.20	62.10	63.00	63.90
100	62.50	63.00	64.00	65.00	66.00	66.66⅔	67.00	68.00	69.00	70.00	71.00

Nos	72 ct.	73 ct.	74 ct.	75 ct.	76 ct.	77 ct.	78 ct.	79 ct.	80 ct.	81 ct.	82 ct.
2	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58	1.60	1.62	1.64
3	2.16	2.19	2.22	2.25	2.28	2.31	2.34	2.37	2.40	2.43	2.46
4	2.88	2.92	2.96	3.00	3.04	3.08	3.12	3.16	3.20	3.24	3.28
5	3.60	3.65	3.70	3.75	3.80	3.85	3.90	3.95	4.00	4.05	4.10
6	4.32	4.38	4.44	4.50	4.56	4.62	4.68	4.74	4.80	4.86	4.92
7	5.04	5.11	5.18	5.25	5.32	5.39	5.46	5.53	5.60	5.67	5.74
8	5.76	5.84	5.92	6.00	6.08	6.16	6.24	6.32	6.40	6.48	6.56
9	6.48	6.57	6.66	6.75	6.84	6.93	7.02	7.11	7.20	7.29	7.38
10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	8.00	8.10	8.20
11	7.92	8.03	8.14	8.25	8.30	8.47	8.58	8.69	8.80	8.91	9.02
12	8.64	8.76	8.88	9.00	9.12	9.24	9.36	9.48	9.60	9.72	9.84
13	9.36	9.49	9.62	9.75	9.88	10.01	10.14	10.27	10.40	10.53	10.66
14	10.08	10.22	10.36	10.50	10.64	10.78	10.92	11.06	11.20	11.34	11.48
15	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	12.00	12.15	12.30
16	11.52	11.68	11.84	12.00	12.16	12.32	12.48	12.64	12.80	12.96	13.12
17	12.24	12.41	12.58	12.75	12.92	13.09	13.26	13.43	13.60	13.77	13.94
18	12.96	13.14	13.32	13.50	13.68	13.86	14.04	14.22	14.40	14.58	14.76
19	13.68	13.87	14.06	14.25	14.44	14.63	14.82	15.01	15.20	15.39	15.58
20	14.40	14.60	14.80	15.00	15.20	15.40	15.60	15.80	16.00	16.20	16 40
25	18.00	18 25	18.50	18.75	19.00	19.25	19.50	19.75	20.00	20.25	20.50
30	21.60	21.90	22.20	22.50	22.80	23.10	23.40	23.70	24.00	24.30	24.60
40	28.80	29.20	29.60	30.00	30.40	30.80	31.20	31.60	32.00	32.40	32.80
50	36.00	36 50	37.00	37.50	38.00	38.50	39.00	39.50	40.00	40.50	41.00
60	43.20	43.80	44.40	45.00	45.60	46.20	46.80	47.40	48.00	48.60	49.20
70	50.40	51.10	51.80	52.50	53.20	53.90	54.60	55.30	56.00	56.70	57.40
80	57.60	58.40	59.20	60.00	60.80	61.60	62.40	63.20	64.00	64.80	65.60
90	64.80	65.70	66.60	67.50	68.40	69.30	70.20	71.10	72.00	72.90	73.80
100	72.00	73.00	74.00	75.00	76.00	77.00	78.00	79.00	80.00	81.00	82.00

READY RECKONER.

If the Number required is not found in the Tables, add two Numbers together; for instance, if 35 bushels are required, add the prices opposite 20 and 5 together; and so for 365 bushels—treble the value of 100, and add 60 and 5 together.

Nos	83 ct.	84 ct.	85 ct.	86 ct.	87 ct.	87½ct.	88 ct.	89 ct.	90 ct.	91 ct.	92 ct.
2	1.66	1.68	1.70	1.72	1.74	1.75	1.76	1.78	1.80	1.82	1.84
3	2.49	2.52	2.55	2.28	2.61	2.62½	2.64	2.67	2.70	2.73	2.76
4	3.32	3.36	3.40	3.44	3.48	3.50	3.52	3.56	3.60	3.64	3.68
5	4.15	4.20	4.25	4.30	4.35	4.37½	4.40	4.45	4.50	4.55	4.60
6	4.98	5.04	5.10	5.16	5.22	5.25	5.28	5.34	5.40	5.46	5.52
7	5.81	5.88	5.95	6.02	6.09	6.12½	6.16	6.23	6.30	6.37	6.44
8	6.64	6.72	6.80	6.88	6.96	7.00	7.04	7.12	7.20	7.28	7.36
9	7.47	7.56	7.65	7.74	7.83	7.87½	7.92	8.01	8.10	8.19	8.28
10	8.30	8.40	8.50	8.60	8.70	8.75	8.80	8.90	9.00	9.10	9.20
11	9.13	9.24	9.35	9.46	9.57	9.62½	9.68	9.79	9.90	10.01	10.12
12	9.96	10.08	10.20	10.32	10.44	10.50	10.56	10.68	10.80	10.92	11.04
13	10.79	10.92	11.05	11.18	11.31	11.37½	11.44	11.57	11.70	11.83	11.96
14	11.62	11.76	11.90	12.04	12.18	12.25	12.32	12.46	12.60	12.74	12.88
15	12.45	12.60	12.75	12.90	13.05	13.12½	13.20	13.35	13.50	13.65	13.80
16	13.28	13.44	13.60	13.76	13.92	14.00	14.08	14.24	14.40	14.56	14.72
17	14.11	14.28	14.45	14.62	14.79	14.87½	14.96	15.13	15.30	15.47	15.64
18	14.94	15.12	15.30	15.48	15.66	15.75	15.84	16.02	16.20	16.38	16.56
19	15.77	15.96	16.15	15.34	16.53	16.62½	16.72	16.91	17.10	17.29	17.48
20	16.60	16.80	17.00	17.20	17.40	17.50	17.60	17.80	18.00	18.20	18.40
25	20.75	21.00	21.25	21.50	21.75	21.87½	22.00	22.25	22.50	22.75	23.00
30	24.90	25.20	25.50	25.80	26.10	26.25	26.40	26.70	27.00	27.30	27.60
40	33.20	33.60	34.00	34.40	34.86	35.00	35.20	35.60	36.00	36.40	36.80
50	41.50	42.00	42.50	43.00	43.50	43.75	44.00	44.50	45.00	45.50	46.00
60	49.80	50.40	51.00	51.60	52.20	52.50	52.80	53.40	54.00	54.60	55.20
70	58.10	58.80	59.50	60.20	60.90	61.25	61.60	62.30	63.00	63.70	64.40
80	66.40	67.20	68.00	68.80	69.60	70.00	70.40	74.20	72.00	72.80	73.60
90	74.70	75.60	76.50	77.40	78.30	78.75	79.20	80.10	81.00	81.90	82.80
100	83.00	84.00	85.00	86.00	87.00	87.50	88.00	89.00	90.00	91.00	92.00

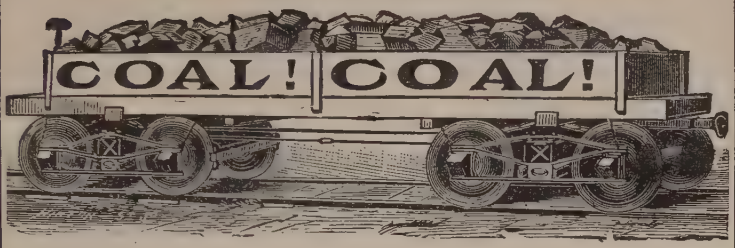
Nos	93 ct.	94 ct.	95 ct.	96 ct.	97 ct.	98 ct.	99 ct.	$1.	$2.	$3.
2	1.86	1.88	1.90	1.92	1.94	1.96	1.98	2.	4.	6.
3	2.79	2.82	2.85	2.88	2.91	2.94	2.97	3.	6.	9.
4	3.72	3.76	3.80	3.84	3.88	3.92	3.66	4.	8.	12.
5	4.65	4.70	4.75	4.80	4.85	4.90	4.95	5.	10.	15.
6	5.58	5.64	5.70	5.76	5.82	5.88	5.94	6.	12.	18.
7	6.51	6.58	6.65	6.72	6.79	6.86	6.93	7.	14.	21.
8	7.44	7.52	7.60	7.68	7.76	7.84	7.92	8.	16.	24.
9	8.37	8.46	8.55	8.64	8.73	8.82	8.91	9.	18.	27.
10	9.30	9.40	9.50	9.60	9.70	9.80	9.90	10.	20.	20.
11	10.23	10.34	10.45	10.56	10.67	10.78	10.89	11.	22.	33.
12	11.16	11.28	11.40	11.52	11.64	11.76	11.88	12.	24.	36.
13	12.09	12.22	12.35	12.48	12.61	12.74	12.87	13.	26.	39.
14	13.02	13.16	13.30	13.44	13.58	13.72	13.86	14.	28.	42.
15	13.95	14.10	14.25	14.40	14.55	14.70	14.85	15.	30.	45.
16	14.88	15.04	15.20	15.36	15.52	15.68	15.84	16.	32.	48.
17	15.81	15.98	16.15	16.32	16.49	16.66	16.83	17.	34.	51.
18	16.74	16.92	17.10	17.28	17.46	17.64	17.82	18.	36.	54.
19	17 67	17.86	18.05	18.24	18.43	18.62	18.81	19.	38.	57.
20	18.60	18.80	19.00	19.20	19.40	19.60	19.80	20.	40.	60.
25	23.25	23.50	23.75	24.00	24.25	24.50	24.75	25.	50.	75.
30	27.90	29.20	28.50	28.80	29.10	29.40	29.70	30.	60.	90.
40	37.20	37.60	38.00	38.40	38.80	39.20	39.00	40.	80.	120.
50	46.50	47.00	47.50	48.00	48.50	49.00	49.50	50.	100.	150.
60	55.80	56.40	57.00	57.60	58.20	58.80	59.40	60.	120.	180.
70	65.10	65.80	66.50	67.20	67.90	68.60	69.30	70.	142.	210.
80	74.40	75.20	76.00	76.80	77.60	78.40	79.20	80.	160.	240.
90	83.70	84.60	85.50	86.40	87.30	88.20	89.10	90.	180.	270.
100	93.00	94.00	95.00	96.00	97.00	98.00	99.00	100.	200.	300.

Table Showing the Value of Coal and Straw

.25	.50	.75	$1\frac{1}{4}$	$2	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{3}{4}$	Weight	$3	$3\frac{1}{4}$	$3\frac{1}{2}$	$4	$4\frac{1}{2}$	$5	$6
.00	.00	.00	.01	.01	.01	.01	.01	10	.02	.02	.02	.02	.02	.03	.03
.00	.01	.01	.02	.02	.02	.03	.03	20	.03	.03	.04	.04	.05	.05	.06
.00	.01	.01	.03	.03	.03	.04	.04	30	.05	.05	.05	.06	.07	.08	.09
.01	.01	.02	.04	.04	.05	.05	.06	40	.06	.07	.07	.08	.09	.10	.12
.01	.01	.02	.04	.05	.06	.06	.07	50	.08	.08	.09	.10	.11	.13	.15
.01	.02	.02	.05	.06	.07	.08	.08	60	.09	.10	.11	.12	.14	.15	.18
.01	.02	.03	.06	.07	.08	.09	.10	70	.11	.11	.12	.14	.16	.18	.21
.01	.02	.03	.07	.08	.09	.10	.11	80	.12	.13	.14	.16	.18	.20	.24
.01	.02	.03	.08	.09	.10	.11	.12	90	.14	.15	.16	.18	.20	.23	.27
.01	.03	.04	.09	.10	.11	.13	.14	100	.15	.16	.18	.20	.23	.25	.30
.13	.25	.38	.88	1.00	1.13	1.25	1.38	1000	1 50	1.63	1.75	2.00	2.25	2.50	3.00
.14	.28	.42	.96	1.10	1.24	1.38	1.51	1100	1.65	1.79	1.93	2.20	2.48	2.75	3.30
.15	.30	.45	1.05	1.20	1.35	1.50	1.65	1200	1.80	1.95	2.10	2.40	2.70	3.00	3.60
.16	.33	.49	1.14	1.30	1.46	1.63	1.79	1300	1.95	2.11	2.28	2.60	2.93	3.25	3.90
.18	.35	.53	1.23	1.40	1.58	1.75	1.93	1400	2.10	2.28	2.45	2.80	3.15	3.50	4.20
.19	.38	.56	1.31	1.50	1.69	1.88	2.06	1500	2.25	2.44	2.63	3.00	3.38	3.75	4.50
.20	.40	.60	1.40	1.60	1.80	2.00	2.20	1600	2.40	2.60	2.80	3.20	3.60	4.00	4.80
.21	.43	.64	1.49	1.70	1.91	2.13	2.34	1700	2.55	2.76	2.98	3.40	3.83	4.25	5.10
.23	.45	.68	1.58	1.80	2.03	2.25	2.48	1800	2.70	2.93	3.15	3.60	4.05	4.50	5.40
.24	.48	.71	1.66	1.90	2.14	2.38	2.61	1900	2.85	3.09	3.33	3.80	4.28	4.75	5.70
.26	.53	.79	1.84	2.10	2.36	2.63	2.89	2100	3.15	3.41	3.68	4.20	4.73	5.25	6.30
.28	.55	.83	1.93	2.20	2.48	2.75	3.03	2200	3.30	3.58	3.85	4.40	4.95	5.50	6.60
.29	.58	.86	2.01	2.30	2.59	2.88	3.16	2300	3.45	3.74	4.03	4.60	5.18	5.75	6.90
.30	.60	.90	2.10	2.40	2.70	3.00	3.30	2400	3.60	3.90	4.20	4.80	5.40	6.00	7.20
.31	.63	.94	2.19	2.50	2.81	3.13	3.44	2500	3.75	4.06	4.38	5.00	5.63	6.25	7.50
.33	.65	.98	2.28	2.60	2.93	3 25	3.58	2600	3.90	4.23	4.55	5.20	5.85	6.50	7.80
.34	.68	1.01	2.36	2.70	3.04	3.38	3.71	2700	4.05	4.39	4.73	5.40	6.08	6.75	8.10
.35	.70	1.05	2.45	2.80	3.15	3.50	3.85	2800	4.20	4.55	4.90	5.60	6.30	7.00	8.40
.36	.73	1.09	2.54	2.90	3.26	3.63	3.99	2900	4.35	4.71	5.08	5.80	6.53	7.25	8.70
.38	.75	1.13	2.63	3.00	3 38	3.75	4.13	3000	4.50	4.88	5.25	6.00	6.75	7.50	9.00

other Articles sold by the Ton.

$7	$8	$9	10	11	12	Weight	13	14	15	16	17	18
.04	.04	.05	.05	.06	.06	10	.07	.07	.08	.08	.09	.09
.07	.08	.09	.10	.11	.12	20	.13	.14	.15	.16	.17	.18
.11	.12	.14	.15	.17	.18	30	.20	.21	.23	.24	.26	.27
.14	.16	.18	.20	.22	.24	40	.26	.28	.30	.32	.34	.36
.18	.20	.23	.25	.28	.30	50	.33	.35	.38	.40	.43	.45
.21	.24	.27	.30	.33	.36	60	.39	.42	.45	.48	.51	.54
.25	.28	.32	.35	.39	.42	70	.46	.49	.53	.56	.60	.63
.28	.32	.36	.40	.44	.48	80	.52	.56	.60	.64	.68	.72
.32	.36	.41	.45	.50	.54	90	.59	.63	.68	.72	.77	.81
.35	.40	.45	.50	.55	.60	100	.65	.70	.75	.80	.85	.90
3.50	4.00	4.50	5.00	5.50	6.00	1000	6.50	7.00	7.50	8.00	8.50	9.00
3.85	4.40	4.95	5.50	6.05	6.60	1100	7.15	7.70	8.25	8.80	9.35	9.90
4.20	4.80	5.40	6.00	6.60	7.20	1200	7.80	8.40	9.00	9.60	10.20	10.80
4.55	5.20	5.85	6.50	7.15	7.80	1300	8.45	9.10	9.75	10.40	11.05	11.70
4.90	5.60	6.30	7.00	7.70	8.40	1400	9.10	9.80	10.50	11.20	11.90	12.60
5.25	6.00	6.75	7.50	8.25	9.00	1500	9.75	10.50	11.25	12 00	12.75	13.50
5.60	6.40	7.20	8.00	8.80	9.60	1600	10 40	11.20	12.00	12.80	13.60	14.40
5.95	6.80	7.65	8.50	9.35	10.20	1700	11.05	11.90	12.75	13.60	14.45	15 30
6.30	7.20	8.10	9.00	9.90	10.80	1800	11.70	12.60	13.50	14.40	15.30	16.20
6.65	7.60	8.55	9.50	10.45	11.40	1900	12.35	13.30	14.25	15.20	16.15	17.10
7.35	8.40	9.45	10.50	11.55	12.60	2100	13.65	14.70	15.75	16 80	17.85	18.90
7.70	8.80	9.90	11.00	12.10	13.20	2200	14.30	15.40	16.50	17.60	18.70	19.80
8.05	9.20	10.35	11.50	12.65	13.80	2300	14.95	16.10	17.25	18.40	19.55	20.70
8.40	9.60	10.80	12.00	13 20	14.40	2400	15.60	16.80	18.00	19.20	20.40	21.60
8.75	10.00	11.25	12.50	13.75	15.00	2500	16.25	17.50	18.75	20.00	21.25	22.50
9 10	10.40	11.70	13.00	14.30	15.60	2600	16.90	18.20	19.50	20.80	22.10	23.40
9.45	10.80	12.15	13.50	14.85	16.20	2700	17.55	18.90	20.25	21.60	22.95	24.30
9.80	11.20	12.60	14.00	15 40	16.80	2800	18.20	19.60	21.00	22.40	23.80	25.20
10.15	11.60	13.05	14.50	15.95	17 40	2900	18.85	20.30	21.75	23.20	24.65	26.10
10 50	12.00	13.50	15.00	16.50	18.00	3000	19.50	21.00	22.50	24.00	25.50	27.00



Weight of Coal in Bin or Box

A solid cubic foot of anthracite coal weighs about 93 pounds. When broken for use it weighs about 54 pounds. Bituminous coal when broken up for use weighs about 50 pounds.

Rule.—Multiply the length in feet by the height in feet, and again by the breadth in feet, and this result by 54 for anthracite coal, or by 50 for bituminous coal, and the result will equal the number of pounds.

To find the number of tons, divide by 2,000.

To Find How Many Tons of Coal a Bin Will Hold

Rule.—Multiply the length, breadth and height (all in feet) together, and this product by 56 for anthracite, or by 50 for bituminous coal. Divide by 2,000 and the result will be the number of tons.

Example.—How many tons of bituminous coal will a bin hold which is 12 feet long, 10 feet wide and 6 feet high?

$12 \times 10 \times 6 = 720$ (cubic feet) $\times 50 = 36{,}000$ pounds.
$36{,}000 \div 2{,}000 = 18$ tons.

To Find the Amount of Charcoal a Bin Will Hold

A bushel of charcoal contains 2,571 cubic inches, and a bushel of bituminous coal 2,688 cubic inches.

Rule.—Multiply the length, breadth and height (all in inches) together, and divide by the number of cubic inches in a bushel.

Example.—How many bushels of charcoal will a bin hold which is 150 inches long, 48 inches wide and 50 inches deep?

$150 \times 48 \times 50 = 360{,}000$ cubic inches in bin.
$360{,}000 \div 2{,}571 = 140$ bushels.

Anthracite coal, when broken for the market, weighs about 56 pounds to the cubic foot. Bituminous coal weighs about 50 pounds.

BUYING AND SELLING BY THE TON

To find the cost of any number of pounds at so much per ton.

Rule.—Remove the decimal point three places to the left, and multiply by one-half the price per ton.

Example.—What will 1799 pounds of hay cost at $10 per ton? 1799 pounds with the point removed equals 1.799, and 1.799 × 5, one-half the price per ton, is $8.995, the answer.

GROCER'S RETAIL RULE

As many articles, such as tea, sugar, coffee, etc., are sold at a given number of pounds per dollar, the following method will show the number of pounds that can be purchased for any number of cents.

Rule.—Multiply the number of pounds to be sold for one dollar by the number of cents' worth desired.

Example.—When sugar is sold at 19 pounds for a dollar, how many pounds can be purchased for 60 cents?

Solution.—19 × 60 = 11.40 or $11\frac{2}{5}$ pounds.

Grocer's Table

12 things make	1 dozen.
12 dozen make	1 gross.
12 gross make	1 great gross.
20 things make	1 score.
196 pounds of flour make	1 barrel.
200 pounds of beef or pork make	1 barrel.
135 pounds of potatoes or apples make	1 barrel.
280 pounds of salt make	1 barrel.
400 pounds of molasses make	1 barrel.
200 pounds of sugar make	1 barrel.
240 pounds of lime make	1 barrel.
100 pounds of fish make	1 quintal.
100 pounds of nails make	1 keg.
50 pounds of soap make	1 box.
20 pounds of raisins make	1 box.
2 pounds of cigars make	1 box.
20 pounds of soda make	1 box.
40 pounds of cheese make	1 box.
25 pounds of tobacco make	1 box.
62 pounds of tea make	1 box.
60 pounds of saleratus make	1 box.
25 pounds of chocolate make	1 box.
56 pounds of butter make	1 firkin.
5 pounds of spices make	1 can.
1100 pounds of rice make	1 tierce.
2150.42 cubic inches make	1 bushel.
231 cubic inches make	1 gallon.

Rapid Methods for Marking Goods

Those who buy largely can best appreciate the value of a quick and rapid method for calculating the per cent of profits desired.

If you wish to calculate the per cent on a single article, the following table will be an excellent method. If you desire to sell an article at any of the following per cents, say the article costs 50 cents, and you wish to make

10 per cent, divide by 10, multiply by 11 = 55.
20 per cent, divide by 10, multiply by 12 = 60.
25 per cent, multiply by 10, divide by 8 = 62½.
30 per cent, divide by 10, multiply by 13 = 65.
33⅓ per cent, add ⅓ of itself = 66.
33⅓ per cent, divide by 3, multiply by 4 = 66⅔.
50 per cent, add ½ of itself = 75.

How to Mark Goods

In many mercantile houses it is customary to use a private mark, which is placed on the goods to denote their cost and selling price. Various devices are used. A word or phrase containing ten different letters is the most common used. These letters are used instead of figures, thus:

C a s h P r o f i t
1 2 3 4 5 6 7 8 9 0

If the cost and selling price of an article were respectively $165 and $210, the mark would be:

c r p

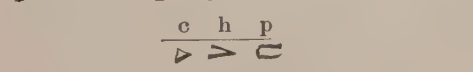
a c t

An extra letter called a "Repeater" is used to prevent the repetition of any figure. Instead of writing 255, which according to the above key would be a p p, the repeater z or any other letter not in the key-word may be used, which would make 255 read a p z.

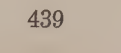
The following are a few of the words that can be used:

Republican.	Regulation.	Quick Sales.	Importance.
Charleston.	Cumberland.	Vanderbilt.	Misfortune.

Instead of letters, characters similar to the following are frequently used:



c h p



WEIGHTS AND MEASURES

WEIGHTS

Troy

24 grains (gr.) 1 pennyw'ht,—dwt.
20 dwts. . . . . 1 ounce,—oz.
3.2 grains, 1 carat, diamond weight.

By this weight gold, silver, and jewels only are weighed. The ounce and pound in this are the same as in apothecaries' weight.

Apothecaries'

20 grains. . . . . 1 scruple.
3 scruples. . . . . 1 drachm.
8 drs. . . . . 1 ounce.
12 ozs. . . . . 1 pound.

Avoirdupois

16 drams (drs.) 1 ounce,—oz.
16 ozs . . . . . 1 pound,—lb.
25 lbs. . . . . 1 quarter,—qr.*
4 quarters. . . . . 100 weight,—cwt.
20 cwts . . . . . 1 ton.

* Formerly 28 lbs. were allowed to the quarter, but the practice is now nearly out of use excepting in the coal mines in Pennsylvania, the Eastern fish markets, and the U. S. Custom House.

Grains are the same in each of the above weights.

5,760 grains, apothecaries' or troy weight. . . . . 1 lb.
7,000 grains, avoirdupois weight 1 lb.

Therefore, 144 lbs. avoir. equal 175 lbs. apoth. or troy.

Of Liquids

1 gallon oil weighs 9.32 lbs. avoir.
1 gallon distilled water, 8.35 lbs.
1 gallon sea water, 10.32 lbs.
1 gallon proof spirits, 9.08 lbs.

MISCELLANEOUS

IRON, LEAD ETC.

14 lbs. . . . . 1 stone.
21½ stones. . . . . 1 pig.
8 pigs. . . . . 1 fother.

BEEF, PORK, ETC.

200 lbs. . . . . 1 barrel.
196 lbs. (flour). . . . . 1 barrel.
100 lbs. (fish). . . . . 1 quintal

MEASURES

Dry

2 pints. . . . . 1 quart,—qt.
8 quarts . . . . . 1 peck,—pk.
4 pecks . . . . . 1 bushel,—bu.
36 bushels. . . . . 1 chaldron.

1 United States standard (Winchester) bushel—18½ inches in diameter, and 8 inches deep—contains 2150.42 cubic inches.

Liquid or Wine

4 gills. . . . . 1 pint,—pt.
2 pints. . . . . 1 quart,—qt.
4 quarts . . . . . 1 gallon,—gal.
31½ gallons. . . . . 1 barrel,—bbl.
2 barrels . . . . . 1 hogshead,—hhd.

U. S. standard gallon . . . . 231 cubic inches.
Beer gallon. . . . 231 cubic inches.
31 beer gallons. . 1 bbl.

Time

60 seconds . . . . . 1 minute.
60 minutes . . . . . 1 hour.
24 hours . . . . . 1 day.
7 days. . . . . 1 week.
4 weeks. . . . . 1 lunar month.
28, 29, 30, or 31 days, } 1 calendar month.
30 days . . . . . 1 month (in computing interest).
52 weeks and 1 day . . . . } 1 year.
12 calendar months . . . . . }
365 days, 5 hours, 48 minutes, and 49 seconds . . . . . 1 solar year.

Circular

60 seconds . . . . . 1 minute.
60 minutes . . . . . 1 degree.
30 degrees. . . . . 1 sign.
90 degrees. . . . . 1 quadrant.
4 quadrants . . . . . } 1 circle
360 degrees. . . . . }

A convenient method of finding the difference in time between two places, is to notice their distance apart, in degrees of longitude, and allow 4 minutes to each degree, based on the following

CALCULATION:

1440 minutes . . . . . 1 day, or revolution of the earth.
1 revolution of the earth is 360 degrees; therefore,
1 degree. . . . . 4 minutes.

MEASURES

Long

DISTANCE

3 barleycorns	1 inch,—in.
12 in.	1 foot,—ft.
3 ft.	1 yard,—yd.
5½ yds.	1 rod,—rd.
40 rds	1 furlong,—fur.
8 fur.	1 mile.

CLOTH

2¼ inches.	1 nail.
4 nails.	1 quarter.
4 quarters.	1 yard.

MISCELLANEOUS

3 inches.	1 palm.
4 inches.	1 hand.
6 inches.	1 span.
18 inches.	1 cubit.
21.8inches.	1 Bible cubit.
2½ feet.	1 military pace.
3 feet.	1 common pace.

Square

144 sq. ins.	1 sq. foot.
9 sq. ft.	1 sq. yard.
30¼ sq. yds.	1 sq. rod.
40 sq. rods	1 rood.
4 roods	1 acre.

Surveyors'

7.92 inches	1 link.
25 links.	1 rod.
4 rods	1 chain.
10 square chains / 160 square rods	1 acre.
640 acres.	1 square mile.

Cubic

1728 cubic inches.	1 cubic foot.
27 cubic feet.	1 cubic yard.
128 cubic feet.	1 cord (wood)
40 cubic feet.	1 ton (shipping)
2150.42 cubic in.	1 standard bu.
268.8 cubic in.	1 standard gal.

1 cubic ft., four-fifths of a bushel.

To find the number of bushels in a bin of any dimensions find the number of cubic feet by multiplying the three dimensions of the bin in feet; deduct one-fifth. and the result is the number of bushels.

PAPER

The Sizes in Inches

Flat Writing-Paper

Flat Letter	10 x 16
Flat Cap	14 x 17
Double Flat Letter	16 x 20
Flat Foolscap	13 x 16
Crown	15 x 19
Folio Post	17 x 22
Demy	16 x 21
Medium	18 x 23
Check Folio	17 x 24
Bank Folio	19 x 24
Double Cap	17 x 28
Royal	19 x 24
Super Royal	20 x 28
Imperial	23 x 31

Of the different sizes there are also several different weights of each size, as Demy 20, 22, 24, 26, and 28 lbs. per ream.

Stationers usually rule, cut and fold the sizes required to make the various styles of letter and note papers—a flat sheet making one, two or four sheets of letter or note paper.

Ledger Papers

Flat Cap	14 x 17
Crown	15 x 19
Folio	17 x 22
Demy	16 x 21
Medium	18 x 23
Royal	19 x 24
Super Royal	20 x 28
Imperial	23 x 31
Elephant	23 x 28

Book Papers

The usual sizes of these, from the different American and English manufacturers, differ but little from the above, except to fill special orders.

Paper Counts

24 sheets.	1 quire.
10½ quires.	1 token.
20 quires.	1 ream.
2 reams.	1 bundle.
5 bundles	1 bale.

Units of Anything

12 pieces.	1 dozen.
12 dozen.	1 gross.
12 gross.	1 great gross.
20 units.	1 score.

THE METRIC SYSTEM

Measures of Length

Metric Denominations and Values.			*Equivalents in Denominations in Use.*
Myriameter	=	10,000 meters	= 6.2137 miles.
Kilometer	=	1,000 meters	= 0.62.137 m. or 3,280 feet 10 in.
Hectometer	=	100 meters	= 328 feet and 1 inch.
Dekameter	=	10 meters	= 393.7 inches.
Meter	=	1 meter	= 39.37 inches.
Decimeter	=	.1 of a meter	= 3.937 inches.
Centimeter	=	.01 of a meter	= 0.3937 inch.
Millimeter	=	.001 of a meter	= 0.0394 inch.

Measures of Surface

Metric Denominations and Values.			*Equivalents in Denominations in Use.*
Hectare	=	10,000 square meters	= 2.471 acres.
Are	=	100 square meters	= 119.6 square yards.
Centare	=	1 square meter	= 1,550 square inches.

Measures of Capacity

Metric Denominations and Values.				*Equivalents in Denominations in Use.*	
NAMES.	No.	Liters.	Cubic Measure.	Dry Measure.	Wine Measure.
Kiloliter	=	1,000 =	1 cubic meter	= 1.308 cubic yards	=264.17 galls.
Hectoliter	=	100 =	.01 cubic meter	= 2 bush. 3.35 pks.	= 26.417 galls.
Decaliter	=	10 =	10 c. decimeters	= 9.08 quarts.	= 2 6417 galls.
Liter	=	1 =	1 c. decimeter	= 0.908 quarts.	= 1.0567 quarts
Deciliter	=	.1 =	.1 c. decimeter	= 6.1022 cubic inch.	= 0.845 gills.
Centiliter	=	.01 =	10 c. centimeters	= 0.6102 cubic inch.	= 0.338 fluid oz.
Milliliter	=	.001 =	1 c. centimeter	= 0.061 cubic inch.	= 0.27 fluid dr.

Weights

Metric Denominations and Values.			*Equivalents in Denominations in Use.*	
NAMES.	No.	Grams.	Weight of what quantity of water at maximum density.	Avoirdupois Weight.
Millier or tonneau	=	1,000,000 =	1 cubic meter	= 2204.6 pounds.
Quintal	=	100,000 =	1 hectoliter	= 220.46 pounds.
Myriagram	=	10,000 =	10 liters	= 22.046 pounds.
Kilogram or kilo	=	1,000 =	1 liter	= 2,2046 pounds.
Hectogram	=	100 =	1 deciliter	= 3.5274 ounces.
Dekagram	=	10 =	10 c. centimet.	= 0.3527 ounces.
Gram	=	1 =	1 c. centimet.	= 15.432 grains.
Decigram	=	.1 =	.1 c. centimet.	= 1.5432 grains.
Centigram	=	.01 =	10 c. millimet.	= 0.1543 grain.
Milligram	=	.001 =	1 c. millimet.	= 0.0154 grain.

Table for Finding the Contents of Square Tanks

A tank five feet by five feet holds	6 barrels.
A tank six feet by six feet holds	8½ "
A tank seven feet by seven feet holds	11½ "
A tank eight feet by eight feet holds	15¼ "
A tank nine feet by nine feet holds	19½ "
A tank ten feet by ten feet holds	23¾ "

The above table is for one foot of depth only.

To find the contents of a trough, measure its depth in feet and multiply it by the contents of one foot in depth.

A Table for Circular Tanks One Foot in Depth

Five feet in diameter holds	4½ barrels.
Six feet in diameter holds	6¾ "
Seven feet in diameter holds	9 "
Eight feet in diameter holds	12 "
Nine feet in diameter holds	15 "
Ten feet in diameter holds	19½ "

N. B.—To find the contents of a tank by the table, multiply the contents of one foot in depth by the number of feet deep.

To Measure Wells or Cisterns

Square the diameter in inches, multiply by the decimal .7854, and the product by the depth of the well or cistern in inches. The result will be the full capacity of the well in cubic inches. If the actual quantity of water be sought, multiply by the depth of water in inches, and in either case divide by 231 for the number of gallons.

Circular Cisterns, One Foot in Depth, Computed

DIAMETER IN INCHES	CONTENTS IN GALLONS	DIAMETER IN INCHES	CONTENTS IN GALLONS
12	5.875	18	13.218
15	9.18	20	16.32
16	10.44	21	18

For any greater depth than one foot, multiply by the number of feet and fractions of a foot. As the areas of circles, and consequently the capacities of circular cisterns of equal depth, vary as the squares of their diameters, it is unnecessary to multiply calculations. For instance, should it be required to find the contents of a circular cistern of 2 feet in diameter, say as the square of 1: to the square of 2:5.875, that is, as 1:4::5.875, and $5.875 \times 4 = 23.5 =$ the contents of such cistern. This formula will apply to any diameter; for 3 feet, multiply by 9; for 4 feet, multiply by 16, etc.; for 5, by 25.

Cisterns and Casks

To Measure the Contents of Cisterns.—To ascertain the contents of circular cisterns, multiply the square of the diameter in feet by the depth in feet, and that product by $\frac{37}{100}$ for the contents in hogsheads, or by $\frac{37.8}{100}$ for barrels, by $\frac{4.7}{8}$ for the contents in gallons.

Square Cisterns.—Multiply the width in feet by the length in feet, and that by the depth in feet, and that again by $\frac{19}{100}$ for hogsheads, or $\frac{12}{10}$ for barrels, or $7\frac{48}{100}$ for gallons.

Another and simpler method is to multiply together the length, width, and depth, in inches, and divide by 231, which will give the contents in gallons.

Cask Gauging.—To measure the contents of cylindrical vessels multiply the square of the diameter in inches by 34, and that by the height in inches, and point off four figures. The result will be the contents or capacity, in wine gallons and decimals of a gallon. For beer gallons multiply by 28 instead of 34. If the cask be only partially filled, multiply by the height of the liquid instead of the height of the cask, to ascertain actual contents. In ascertaining the diameter, measure the diameter at the bung and at the head, add together, and divide by 2 for the mean diameter.

TANK AND BARREL MEASUREMENT

To Find the Contents of a Round Tank

Multiply the square of the diameter in feet by the depth in feet, and multiply this result by 6, and you have the approximate contents of the tank in gallons. (For exact results multiply the product by $5\frac{7}{8}$, instead of 6.)

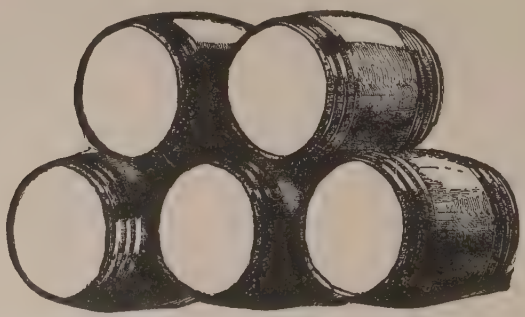
Example.—How many gallons will a tank hold 7 feet in diameter and 5 feet deep?

Solution.—$7\times7\times5=245$.

$245\times6=1{,}470$ gallons.

NOTE.—If the tank is larger at the bottom than at the top, find the average diameter by measuring the middle part of the tank halfway between the top and bottom.

To Find the Capacity of Barrels



Rule.—Add the head and bung diameters in inches, and divide by two for the mean diameter. Then multiply the average diameter by itself in inches, and again by the height in inches,

then multiply by 8, cut off the right-hand figure, and you have the number of cubic inches. Divide by $277\frac{1}{4}$ and you have the number of gallons.

To find the bushels divide by 2150.4.

Example.—How many gallons in a barrel, whose middle or bung diameter is 20 inches, and end diameter is 16 inches, and 30 inches in height?

Solution.—$20+16\div2=18$ average diameter.

$18\times18\times30\times8=7776$.

$7776\div277\frac{1}{4}=28\frac{52}{119}$ gallons.

NOTE—A barrel is estimated usually at $31\frac{1}{2}$ gallons. The hogshead at 63 gallons.

To Find the Contents of a Watering-Trough

Rule.—Multiply the height in feet by the length in feet, and the product by the width in feet, and divide the result by 4, and you will have the contents in barrels of $31\frac{1}{2}$ gallons each.

Example.—What are the contents of a watering-trough 10 feet long, 6 feet wide, and 4 feet deep?

Solution.—$4\times10\times6=240\div4=60$ barrels.

NOTE—For exact results multiply the length in inches by the height in inches, by the width in inches, and divide the result by 231, and you will have the contents in gallons.

BUILDERS' TABLES

BUILDERS' ESTIMATING TABLES

Quantity of material in every four lineal feet of exterior wall in a balloon frame building, height of wall being given:

Length of Studs.	Size of Sills.	Size of Studs, Braces, etc.	Quantity of Rough Lumber.	Quantity of inch Boarding	Siding in sup. ft.	Tar Paper in sup. feet.
8	6 x 6	2 x 4 Studs	42	36	40	74
10	6 x 8	4 x 4 Braces	52	44	50	80
12	6 x 10	4 x 4 Plates	62	53	60	96
14	6 x 10	1 x 6 Ribbons	69	62	70	112
16	8 x 10		82	71	80	128
18	8 x 10	Studs	87	80	90	144
20	8 x 12	16 inches from	98	88	100	160
22	9 x 12	centers	109	97	110	176
24	10 x 12		119	106	120	192
18	10 x 10	2 x 6 Studs	122	80	90	144
20	10 x 12	6 x 6 Braces	137	88	100	160
22	10 x 12	4 x 6 Plates	145	97	110	176
24	12 x 12	1 x 6 Ribbons	162	106	120	192
26	10 x 14		169	114	130	208
28	10 x 14	Studs 16-inch centers	176	123	140	224
30	12 x 14		198	132	150	240

Amount of lumber in rafters, collar-piece and boarding, and number of shingles to four lineal feet of roof, measured from eave to eave over ridge. Rafters 16-inch centers:

Width of House, Feet.	Size of Rafters.	Size of Collar-piece.	Quantity of Lumber in Rafter and Collar-piece.	Quantity of Boarding. Feet.	No. of Shingles.
14	2 x 4	2 x 4	39	91	560
16	2 x 4	2 x 4	45	70	640
18	2 x 4	2 x 4	50	79	720
20	2 x 4	2 x 4	56	88	800
22	2 x 4	2 x 4	62	97	880
24	2 x 4	2 x 4	67	106	960
20	2 x 6	2 x 6	84	88	800
22	2 x 6	2 x 6	92	97	880
24	2 x 6	2 x 6	101	106	960
26	2 x 6	2 x 6	109	115	1040
28	2 x 6	2 x 6	117	124	1120
30	2 x 6	2 x 6	126	133	1200

Comparative Strength of Timber and Cast Iron

Table showing the transverse strength of timber and of cast iron one foot long and one inch square.

Material.	Breaking Weight, lbs.	Weight Borne with Safety, lbs.
Ash, seasoned	175	105
Chestnut, seasoned	170	115
Hickory, seasoned	270	200
White Oak, seasoned	240	196
White Pine, seasoned	135	95
Yellow Pine, seasoned	150	100
Iron (cast)	5,781	4,000

BUILDERS' TABLE OF BRICK REQUIRED

(Allowing 7 Brick to Superficial Square Foot.)

Square feet of wall surface.	Number of Bricks required in a					
	Wall 4 inches thick.	Wall 8 inches thick.	Wall 12 inches thick.	Wall 16 inches thick.	Wall 20 inches thick.	Wall 24 inches thick.
1	7	15	23	30	38	45
2	15	30	45	60	75	90
3	23	45	68	90	113	135
4	30	60	90	120	150	180
5	38	75	113	150	188	225
6	45	90	135	180	225	270
7	53	105	158	210	263	315
8	60	120	180	240	300	360
9	68	135	203	270	338	405
10	75	150	225	300	375	450
20	150	300	450	600	750	900
30	225	450	675	900	1,125	1,350
40	300	600	900	1,200	1,500	1,800
50	375	750	1,125	1,500	1,875	2,250
60	450	900	1,350	1,800	2,250	2,700
70	525	1,050	1,575	2,100	2,625	3,150
80	600	1,200	1,800	2,400	3,000	3,600
90	675	1,350	2,025	2,700	3,375	4,050
100	750	1,500	2,250	3,000	3,750	4,500
200	1,500	3,000	4,500	6,000	7,500	9,000
300	2,250	4,500	6,750	9,000	11,250	13,500
400	3,000	6,000	9,000	12,000	15,000	18,000
500	3,750	7,500	11,250	15,000	18,750	22,500
600	4,500	9,000	13,500	18,000	22,500	27,000
700	5,250	10,500	15,750	21,000	26,250	31,500
800	6,000	12,000	18,000	24,000	30,000	36,000
900	6,750	13,500	20,250	27,000	33,750	40,500
1,000	7,500	15,000	22,500	30,000	37,500	45,000

Facts for Builders

100 square feet of surface, 4 inches to weather, requires about 1,000 shingles.

1,000 shingles require of shingle nails about 5 pounds.

70 yards of surface will require about 1,000 laths.

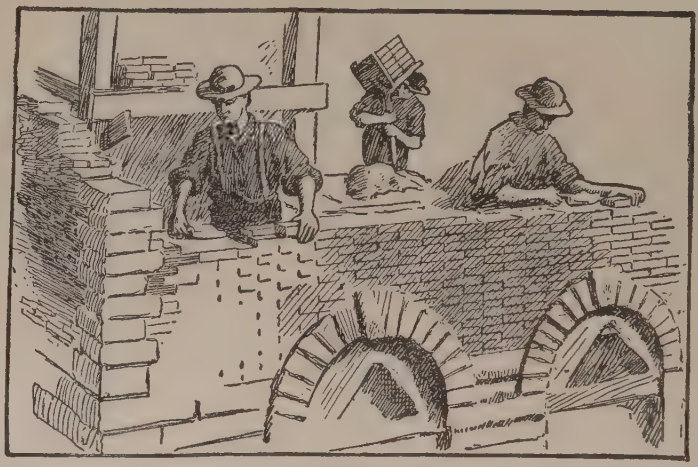
100 square yards of plaster will require 16 bu. sand, 8 bu. lime, 1 bu. hair.

1,000 laths will require of lath nails 11 pounds.

100 cubic feet of wall will require 1 cord stone, 3 bu. lime and 1 cubic yard of sand.

One-fifth more siding is required than surface measure, to allow for lap.

FACTS FOR BUILDERS



FACTS CONCERNING STONEWORK, BRICKWORK AND PLASTERING

Stonework

1. A cord of stone, three bushels of lime and a cubic yard of sand will make 100 cubic feet of wall.

2. One cubic foot of stonework weighs from 130 to 175 pounds.

Brickwork

3. Five courses of brick will make one foot in height on a chimney.

4. One cubic foot of brickwork, with common mortar, weighs from 100 to 110 pounds.

5. A cask of lime will make mortar sufficient for 1,000 bricks.

For Plastering

6. Six bushels of lime, 40 cubic feet of sand* and 1½ bushels of hair will plaster 100 square yards with two coats of mortar.

*N. B. There are about 1¼ cubic feet in a bushel.

Common Brick in a Wall or Building

A brick is 8 inches long, 4 inches wide and 2 inches thick, and contains 64 cubic inches. Twenty-seven brick make one cubic foot of wall, without mortar, and it takes from 20 to 22 bricks, according to the amount of mortar used, to make a cubic foot of wall with mortar.

Rule.—Multiply the length of the wall in feet by the height in feet, and that by its thickness in feet, and then multiply that result by 20, and the product will be the number of bricks in the wall.

N. B.—For a wall 8 inches thick multiply the length in feet by the height in feet and that result by 15, and the product will equal the number of bricks. When doors and windows occur in the wall multiply their height, width and thickness together and deduct the amount from the solid contents of the wall before multiplying by 20 or 15, as the case may be.

Short Method of Estimating Stonework

Rule.—Multiply the length in feet by the height in feet, and that by the thickness in feet, and divide this result by 22 and the quotient will be the number of perches of stone in the wall.

N. B.—In a perch of stone there are 24¾ cubic feet, but 2¾ cubic feet are generally allowed for the mortar and filling.

How to Find the Number of Cord Stone to Build Cellar and Barn Walls

Rule.—Multiply the length, height and thickness together in feet, and divide the result by 100.

N. B.—There are 128 cubic feet in a cord, but the mortar and sand make it necessary to use but 100 cubic feet of stone.

The Number of Bricks Required for a Building

The average brick is eight inches long, four inches wide and two inches thick, or 64 (8×4×2) cubic inches; 1,728 cubic inches make one cubic foot, and 27 bricks make 1,728 (64×27) cubic inches. In laying bricks $\frac{1}{6}$ is allowed for mortar, or $4\frac{1}{2}$ out of every 27, leaving $22\frac{1}{2}$ actual bricks for each cubic foot. Therefore, multiply the dimensions—length, height and thickness—in feet and fraction of a foot, of the several brick walls, and the product by $22\frac{1}{2}$ and the result will be the number of bricks required. Multiply by 20 instead of $22\frac{1}{2}$ if the bricks are larger than the average above given. Allowance should be made for chimneys, projections for mantels and the like on the same basis.

Number of Perches of Stone Required for a Wall or Cellar

The perch of stone is now computed at a perch, or 16.5 feet in length by 1.5 feet in width and 1 foot in height, or 24.75 (16.5×1.5×1) cubic feet. Of this amount one-ninth, 2.75 cubic feet, is allowed for mortar and filling. Multiply the three dimensions of the wall or walls in feet—width, height and thickness—and divide by 22 (24.75—2.75) if the needed quantity of stone is the subject of inquiry, or by 24.75 if it be sought to ascertain the amount of masonry in the wall or cellar.

BUYING AND SELLING LUMBER

To find the cost of any number of feet of lumber at so much per thousand feet.

Rule.—Remove the decimal point three places to the left in any number of feet, and multiply by the price of one thousand feet.

Example.—What will 859 feet of lumber cost at $12 per thousand feet? Remove the point three places to the left in 859=.859, and .859×$12=$10.308, the answer.

The Number of Cubic Feet in a Round Log of Uniform Diameter

Square the diameter, in inches, multiply by .7854, and multiply this product by the length in feet, divide by 144, and the quotient is the number of cubic feet.

Estimate of the Number of Cubic Feet in the Trunk of a Standing Tree

Find the circumference in inches, divide by 3.1416, square the quotient, multiply by the length in feet, divide by 144; deduct about one-tenth for thickness of bark, and the result will be, approximately, the number of cubic feet.

FACTS FOR LUMBERMEN

The Number of Feet, Board Measure, in a Log of Unequal Diameters

Square the smallest diameter in inches, multiply by .7854, and the product by the length of the log in feet, divide by 12, and the quotient will be the number of feet of board measure, approximately.

The Number of Feet, Board Measure, in a Lot of Boards, Planks, Flooring, Scantling, Joists, Sills or Beams

The foot of board measure is a superficial or square foot, one inch thick. Multiply the product of the width and thickness of each board, plank or other article, in inches, by the length in feet and fractions of a foot, divide by 12, and the quotient will be the number of feet of board measure. In flooring, allowance must be made for rabbeting, the proportion varying with the depth of the groove and the width of the boards.

The Number of Square Yards in a Floor or Wall

Multiply the length and width of the floor, or height and width of the wall, in feet and fractions of a foot, divide by nine, and the quotient is the number of square yards.

BOARD AND PLANK MEASUREMENT—AT SIGHT

This Table gives the Sq. Ft. and In. in Board from 6 to 25 in. wid , and from 8 to 36 ft. long If a board be longer than 36 ft., unite two numbers. Thus, if a Board is 40 ft. long and 16 in. wide, add 30 and 10 and you have 53 ft. 4 in. For 2-in Plank double the *product*.

Feet Long.	6 in W	7 in W	8 in W	9 in W	10in W	11in W	12in W	13 in W	14 in W	15 in W
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in	ft in.	ft in	ft. in.	ft. in	ft. in.
8	4 0	4 8	5 4	6 0	6 8	7 4	8 0	8 8	9 4	10 0
9	4 6	5 3	6 0	6 9	7 6	8 3	9 0	9 9	10 6	11 3
10	5 0	5 10	6 8	7 6	8 4	9 2	10 0	10 10	11 8	12 6
11	5 6	6 5	7 4	8 3	9 2	10 1	11 0	11 11	12 10	12 9
12	6 0	7 0	8 0	9 0	10 0	11 0	12 0	13 0	14 0	15 0
13	6 6	7 7	8 8	9 9	10 10	11 11	13 0	14 1	15 2	16 3
14	7 0	8 2	9 4	10 6	11 8	12 10	14 0	15 2	16 4	17 6
15	7 6	8 9	10 0	11 3	12 6	13 9	15 0	16 3	17 6	18 9
16	8 0	9 4	10 8	12 0	13 4	14 8	16 0	17 4	18 8	20 0
17	8 6	9 11	11 4	12 9	14 2	15 7	17 0	18 5	19 10	21 3
18	9 0	10 6	12 0	13 6	15 0	16 6	18 0	19 6	21 0	22 6
19	9 6	11 1	12 8	14 3	15 10	17 5	19 0	20 7	22 2	23 9
20	10 0	11 8	13 4	15 0	16 8	18 4	20 0	21 8	23 4	25 0
21	10 6	12 3	14 0	15 9	17 6	19 3	21 0	22 9	24 6	26 3
22	11 0	12 10	14 8	16 6	18 4	20 2	22 0	23 10	25 8	27 6
23	11 6	13 5	15 4	17 3	19 2	21 1	23 0	24 11	26 10	28 9
24	12 0	14 0	16 0	18 0	20 0	22 0	24 0	26 0	28 0	30 0
25	12 6	14 7	16 8	18 9	20 10	22 11	25 0	27 1	29 2	31 3
26	13 0	15 2	17 4	19 6	21 8	23 10	26 0	28 2	30 4	32 6
27	13 6	15 9	18 0	20 3	22 6	24 9	27 0	29 3	31 6	33 9
28	14 0	16 4	18 8	21 0	23 4	25 8	28 0	30 4	32 8	35 0
29	14 6	16 11	19 4	21 9	24 2	26 7	29 0	31 5	33 10	36 3
30	15 0	17 6	20 0	22 6	25 0	27 6	30 0	32 6	35 0	37 6
31	15 6	18 1	20 8	23 3	25 10	28 5	31 0	33 7	36 2	38 9
32	16 0	18 8	21 4	24 0	26 8	29 4	32 0	34 8	37 4	40 0
33	16 6	19 3	22 0	24 9	27 6	30 3	33 0	35 9	38 6	41 3
34	17 0	19 10	22 8	25 6	28 4	31 2	34 0	36 10	39 8	42 6
35	17 6	20 5	23 4	26 3	29 2	32 1	35 0	37 11	40 10	43 9
36	18 0	21 0	24 0	27 0	30 0	33 0	36 0	39 0	42 0	45 0

BOARD TABLE MEASUREMENT—Continued.

Feet Long.	16in W	17in W	18in W	19in W	20in W	21in W	22 in W	23 in W	24in W	25 in W
	ft In.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
8	10 8	11 4	12 0	12 8	13 4	14 0	14 8	15 4	16 0	16 8
9	12 0	12 9	13 6	14 3	15 0	15 9	16 6	17 3	18 0	18 9
10	13 4	14 2	15 0	15 10	16 8	17 6	18 4	19 2	20 0	20 10
11	14 8	15 7	16 6	17 5	18 4	19 3	20 2	21 1	22 0	22 11
12	16 0	17 0	18 0	19 0	20 0	21 0	22 0	23 0	24 0	25 0
13	17 4	18 5	19 6	20 7	21 8	22 9	23 10	24 11	26 0	27 1
14	18 8	19 10	21 0	22 2	23 4	24 6	25 8	26 10	28 0	29 2
15	20 0	21 3	22 6	23 9	25 0	26 3	27 6	28 9	30 0	31 3
16	21 4	22 8	24 0	25 4	26 8	28 0	29 4	30 8	32 0	33 4
17	22 8	24 1	25 6	26 11	28 4	29 9	31 2	32 7	34 0	35 5
18	24 0	25 6	27 0	28 6	30 0	31 6	33 0	34 6	36 0	37 6
19	25 4	26 11	28 6	30 1	31 8	33 3	34 10	36 5	38 0	39 7
20	26 8	28 4	30 0	31 8	33 4	35 0	36 8	38 4	40 0	41 8
21	28 0	29 9	31 6	33 3	35 0	36 9	38 6	40 3	42 0	43 9
22	29 4	31 2	33 0	34 10	36 8	38 6	40 4	42 2	44 0	45 10
23	30 8	32 7	34 6	36 5	38 4	40 3	42 2	44 1	46 0	47 11
24	32 0	34 0	36 0	38 0	40 0	42 0	44 0	46 0	48 0	50 0
25	33 4	35 5	37 6	39 7	41 8	43 9	45 10	47 11	50 0	52 1
26	34 8	36 10	39 0	41 2	43 4	45 6	47 8	49 10	52 0	54 2
27	36 0	38 3	40 6	42 9	45 0	47 3	49 6	51 9	54 0	56 3
28	37 4	39 8	42 0	44 4	46 8	49 0	51 4	53 8	56 0	58 4
29	38 8	41 1	43 6	45 11	48 4	50 9	53 2	55 7	58 0	60 5
30	40 0	42 6	45 0	47 6	50 0	51 6	55 0	57 6	60 0	62 6

SCANTLING REDUCED TO ONE INCH BOARD MEASURE.

SCANTLING AND TIMBER MEASURE

REDUCED TO ONE INCH BOARD MEASURE.

EXPLANATION.—To ascertain the number of Feet of Scantling or Timber, say 18 Feet Long and 2 by 3 Inches. Find 2 by 3 in the top columns, and 18 in the left hand column, and under 2 by 3 and against 18 is 9 feet.

If the Scantling is longer than contained in the Table, add two lengths together. If shorter, take part off some length.

Feet.	THICKNESS AND WIDTH IN INCHES.															
	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.4
6	2.	3.	4.	5.	6.	7.	8.	9.	4.6	6.	7.6	9.	10.6	12.	13.6	8.
7	2.4	3.6	4.8	5.10	7.	8. 2	9.4	10.6	5.3	7.	8.9	10.6	12.3	14.	15.9	9.4
8	2.8	4.	5.4	6. 8	8.	9. 4	10.8	12.	6.	8.	10.	12.	14.	16.	18.	10.
9	3.	4.6	6.	7. 6	9.	10. 6	12.	13.6	6.9	8.	11.3	13.6	15.9	18.	20.3	12.
10	3.4	5.	6.8	8. 4	10.	11. 8	13.5	15.	7.6	10.	12.6	15.	17.6	20.	22.6	13.4
11	3.8	5.6	7.4	9. 2	11.	12. 10	14.8	16.6	8.3	11.	13.9	16.6	19.3	22.	24.9	14.8
12	4.	6.	8.	10.	12.	14.	16.	18.	9.	12.	15.	18.	21.	24.	27.	16.
13	4.4	6.6	8.8	10.10	13.	15. 2	17.4	19.6	9.9	13.	16.3	19.6	22.9	26.	29.3	17.4
14	4.8	7.	9.4	11. 8	14.	16. 4	18.8	21.	10.6	14.	17.6	21.	24.6	28.	31.6	18.8
15	5.	7.6	10.	12. 6	15.	17. 6	20.	22.6	11.3	15.	18.9	22.6	26.3	30.	33.9	20.0
16	5.4	8.	10.8	13. 4	16.	18. 8	21.4	24.	12.	16.	20.	24.	28.	32.	36.	21.4
17	5.8	8.6	11.4	14. 2	17.	19. 10	22.8	25.6	12.9	17.	21.3	25.6	29.9	34.	38.3	22.8
18	6.	9.	12.	15.	18.	21.	24.	27.	13.6	18.	22.6	27.	31.6	36.	40.6	24.
19	6.4	9.6	12.8	15.10	19.	22. 2	25.4	28.6	14.3	19.	23.9	28.6	33.3	38.	42.9	24.4
20	6.8	10.	13.4	16. 8	20.	23. 4	26.8	30.	15.	20.	25.	30.	35.	40.	45.	26.8
21	7.	10.6	14.	17. 6	21.	24. 6	28.	31.6	15.9	21.	26.3	31.6	36.9	42.	47.3	28.
22	7.4	11.	14.8	18. 4	22.	25. 8	29.4	33.	16.6	22.	27.6	33.	38.6	44.	49.6	29.4
23	7.8	11.6	15.4	19. 2	23.	26. 10	30.8	34.6	17.3	23.	28.9	34.6	40.3	46.	51.9	30.8
24	8.	12.	16.	20.	24.	28.	32.	36.	18.	24.	30.	36.	42.	48.	54.	32.
25	8.4	12.6	16.8	20.10	25.	29. 2	33.4	37.6	18.9	25.	31.3	37.6	43.9	50.	56.3	33.4
30	10.	15.	20.	25.	30.	35.	40.	45.	22.6	30.	37.6	45.	52.6	60.	67.6	40.
34	11.4	17.	22.8	28. 4	34.	39. 3	45.4	51.	25.6	34.	42.6	51.	59.6	68.	76.6	45.4
40	13.4	20.	26.8	33. 4	40.	46. 8	53.4	60.	30.0	40.	50.	60.	70.	80.	90.	53.

Feet.	THICKNESS AND WIDTH IN INCHES.														
	5.4	4.6	4.7	4.8	4.9	5.5	5.6	5.7	5.8	5.9	6.6	6.7	6.8	6.9	6.10
6	10.	12.	14.	16.	18.	12. 6	15.	17. 6	20.	22.6	18.	21.	24.	27.	30.
7	11.8	14.	16.4	18.8	21.	14. 7	17.6	20. 5	23.4	26.3	21.	24.6	28.	31.6	35.
8	13.4	16.	18.8	21.4	24.	16. 8	20.	23. 4	26.8	30.	24.	28.	32.	36.	40.
9	15.	18.	21.	24.	27.	18. 9	22.6	26. 3	30.	33.9	27.	31.6	36.	40.6	45.
10	16.8	20.	23.4	26.8	30.	20.10	25.	29. 2	33.4	37.6	30.	35.	40.	45.	50.
11	18.4	22.	25.8	29.4	33.	22.11	27.6	32. 1	36.8	41.3	33.	38.6	44.	49.6	55.
12	20.	24.	28.	32.	36.	25.	30.	35.	40.	45.	36.	42.	48.	54.	60.
13	21.8	26.	30.4	34.8	39.	27. 1	32.6	37.11	43.4	48.9	39.	45.6	52.	58.6	65.
14	23.4	28.	32.8	37.4	42.	29. 2	35.	40.10	46.8	52.6	42.	49.	56.	63.	70.
15	25.	30.	35.	40.	45.	31. 3	37.6	43. 9	50.	56.3	45.	52.6	60.	67.6	75.
16	26.8	32.	37.4	42.8	48.	33. 4	40.	46. 8	53.4	60.	48.	56.	64.	72.	80.
17	28.4	34.	39.8	45.4	51.	35. 5	42.6	49. 7	56.8	63.9	51.	59.6	68.	76.6	85.
18	30.	36.	42.	48.	54.	37. 6	45.	52. 6	60.	67.6	54.	63.	72.	81.	90.
19	31.8	38.	44.4	50.8	57.	39. 7	47.6	55. 5	63.4	71.3	57.	66.6	76.	85.6	95.
20	33.4	40.	46.8	53.4	60.	41. 8	50.	58. 4	66.8	75.	60.	70.	80.	90.	100.
21	35.	42.	49.	56.	63.	43. 9	52.6	61. 3	70.	78.9	63.	73.6	84.	94.6	105.
22	36.8	44.	51.4	58.8	66.	45.10	55.	64. 2	73.4	82.6	66.	77.	88.	99.	110.
23	38.4	46.	53.8	61.4	69.	47.11	57.6	67. 1	76.8	86.3	69.	80.6	92.	103.6	115.
24	40.	48.	56.	64.	72.	50.	60.	70.	80.	90.0	72.	84.	96.	108.	120.
25	41.8	50.	58.4	66.8	75.	52. 1	62.6	72.11	83.4	93.9	75.	87.6	100.	112.6	125.
30	50.	60.	70.	80.	90.	62. 6	75.	87. 6	100.	112.6	90.	105.	120.	135.	150.
34	56.8	68.	79.4	90.8	102.	70.10	85.	99. 2	113.4	127.6	102.	119.	136.	153.	170.
40	66.8	80.	93.4	106.8	120.	83. 4	100.	116.8	133.4	150.	120.	140.	160.	180.	200.

THICKNESS AND WIDTH IN INCHES.

Feet.	6.11	6.12	7.7	7.8	7.9	7.10	7.11	7.12	8.8	8.9	8.10	8.11	8.12
6	33.	36.	24. 6	28.	31.6	35.	38. 6	42.	32.	36.	40.	44.	48.
7	38.6	42.	28. 7	32.8	36.9	40.10	41.11	49.	37.4	42.	46.8	51.4	56.
8	44.	48.	32. 8	37.4	42.	46. 8	51. 4	56.	42.8	48.	53.4	58.8	64.
9	49.6	54.	36. 9	42.	47.3	52. 6	57. 9	63.	48.	54.	60.	66.	72.
10	55.	60.	40.10	46.8	52.6	58. 4	64. 2	70.	53.4	60.	66.8	73.4	80.
11	60.6	66.	40.11	51.4	57.9	64. 2	70. 7	77.	58.8	66.	73.4	80.8	88.
12	66.	72.	49.	56.	63.	70.	77.	84.	64.	72.	80.	88.	96.
13	71.6	78.	53. 1	60.8	68.3	75.10	83. 5	91.	69.4	78.	86.8	95.4	104.
14	77.	84.	57. 2	65.4	73.6	81. 8	89.10	98.	74.8	84.	93.4	102.8	112.
15	82.6	90.	61. 3	70.	78.9	87. 6	96. 3	105.	80.	90.	100.	110.	120.
16	88.	96.	64. 4	74.8	84.	93. 4	102. 8	112.	85.4	96.	106.8	117.4	128.
17	93.6	102.	69. 5	79.4	89.3	99. 2	109. 1	119.	90.8	102.	113.4	124.8	136.
18	99.	108.	73. 6	84.	94.6	105.	115. 6	126.	96.	108.	120.	132.	144.
19	104.6	114.	77. 7	88.8	99.9	110.10	121.11	133.	101.4	114.	126.8	139.4	152.
20	110.	120.	81. 8	93.4	105.	116. 8	128. 4	140.	106.8	120.	133.4	146.8	160.
21	115.6	126.	85. 9	98.	110.3	122. 6	134. 9	147.	112.	126.	140.	154.	168.
22	121.	132.	89.10	102.8	115.6	128. 5	141. 2	154.	117.4	132.	146.8	161.4	176.
23	126.6	138.	93.11	107.4	120.9	134. 2	147. 7	161.	122.8	138.	153.4	168.8	134.
24	132.	144.	98.	112.	126.	140.	154.	168.	128.	144.	160.	176.	192.

Ft.	9.9	9.10	9.11	9.12	10.10	10.11	10.12	11.11	11.12	12.12	12.13	12.14
6	40.6	45.	49.6	54.	50.0	55.	60.	60. 6	66.	72.	78.	84.
7	47.3	52.6	57.9	63.	58.4	64. 2	70.	70. 7	77.	84.	91.	98.
8	54.	60.	66.	72.	66.8	73. 4	80.	80. 8	88.	96.	104.	112.
9	60.9	67.6	74.3	81.	75.	86. 6	90.	99. 9	99.	108.	117.	126.
10	67.6	75.	82.6	90.	83.4	91. 8	100.	100.10	110.	120.	130.	140.
11	74.3	82.6	90.9	99.	91.8	100.10	110.	110.11	121.	132.	143.	154.
12	81.	90.	99.	108.	100.	110.	120.	121.	132.	144.	156.	168.
13	87.9	97.6	107.3	117.	108.4	119. 2	130.	131. 1	143.	156.	169.	182.
14	94.6	105.	115.1	126.	116.8	128. 4	140.	141. 2	154.	168.	182.	196.
15	101.3	112.6	123.9	135.	125.	137. 6	150.	151. 3	165.	180.	195.	210.
16	108.	120.	132.	144.	133.4	146. 8	160.	161. 4	176.	192.	208.	224.
17	114.9	127.6	140.3	153.	141.8	155.10	170.	171. 5	187.	204.	221.	238.
18	121.6	135.	148.6	162.	150.	165.	180.	181. 6	198.	216.	234.	252.
19	128.3	142.6	156.9	171.	158.4	174. 2	191.	191. 7	209.	228.	247.	266.
20	135.	150.	165.	180.	166.8	183. 4	200.	201. 8	220.	240.	260.	280.
21	141.9	157.6	173.3	189.	175.	192. 6	210.	211. 9	231.	252.	273.	294.
22	148.6	165.	181.6	198.	183.4	201. 8	220.	221.10	242.	264.	286.	308.
23	155.3	172.6	189.9	207.	191.9	210.10	230.	231.11	253.	276.	299.	322.
24	162.	180.	198.	216.	200.	220.	240.	242.	264.	188.	312.	336.

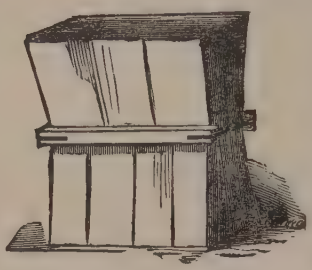
Ft.	12.15	12.16	13.13	13.14	13.15	13.16	14.14	14.15	14.16	15.15	15.16
6	90.	96.	83. 6	91.	97.6	104.	98.	105.	112.	112.6	120.
7	105.	112.	98. 7	106. 2	113.9	121.3	114.4	122.6	130.3	131.3	140.
8	135.	128.	112. 8	121. 4	130.	138.8	130.8	140.	149.4	150.	160.
9	135.	144.	126. 9	136. 6	146.3	156.	147.	157.6	168.	168.9	180.
10	150.	160.	140.10	151. 8	162.6	173.4	163.4	175.	186.8	187.6	200.
11	165.	176.	154.11	166.10	178.9	190.8	179.8	192.6	205.4	206.3	220.
12	180.	192.	169.	182.	195.	208.	196.	210.	224.	225.	240.
13	195.	208.	183. 1	197. 2	211.3	225.4	212.4	227.6	242.8	243.9	260.
14	210.	224.	197. 2	212. 4	227.6	242.8	228.8	245.	261.4	262.6	280.
15	225.	240.	211. 3	227. 6	243.9	260.	245.	262.6	280.	281.3	300.
16	240.	256.	225. 4	242. 8	260.	277.4	261.4	280.	298.8	300.	320.
17	255.	272.	239. 5	257.10	276.3	294.8	277.8	297.6	317.4	318.9	340.
18	270.	288.	243. 6	273.	292.6	312.	290.	314.	336.	337.6	360.
19	385.	304.	257. 7	288. 2	308.9	329.4	310.4	332.6	354.8	356.3	380.
20	300.	320.	271. 8	303. 4	325.	346.8	326.8	350.	373.4	375.	400.
21	315.	336.	285. 9	318. 6	341.3	364.	343.	367.6	392.	393.9	420.
22	330.	352.	299.10	333. 8	357.6	381.4	359.4	385.	410.8	412.6	440.
23	345.	368.	313.11	318.10	373.9	398.8	375.8	402.6	429.4	431.3	460.
24	369.	384.	338.	364.	390.	416.	392.	420.	448.	450.	480.

LOGS REDUCED TO ONE INCH BOARD MEASURE.

Length in feet in top line. Diameter in inches in heavy column.
Example: A log 18 ft. long and 24 in. in diameter at small end makes 464 sq. ft.
Rule: For logs over 13 in. in diameter, subtract 60 from the square of diameter, multiply remainder by half the length in feet, and point off the right hand figure. Result is the number of sq. ft.

10	12	14	16	Diam	18	20	22	24	26	28	30	34
25	30	35	40	*10*	45	50	55	60	65	70	75	85
33	40	46	53	*11*	59	66	73	79	86	92	99	112
43	52	60	69	*12*	77	86	95	103	112	120	129	146
55	66	77	88	*13*	99	110	121	132	143	154	165	187
68	82	95	109	*14*	122	136	150	163	177	190	204	231
83	99	116	132	*15*	149	165	182	198	215	231	248	281
98	118	137	157	*16*	176	196	216	235	255	274	294	333
115	137	160	183	*17*	206	229	252	275	298	321	344	389
132	158	185	211	*18*	238	264	290	317	343	370	396	449
151	181	211	241	*19*	271	301	331	361	391	421	452	512
170	204	238	272	*20*	306	340	374	408	442	476	510	578
191	229	267	305	*21*	343	381	419	457	495	533	572	648
212	254	297	339	*22*	382	424	466	509	551	594	636	721
235	281	328	375	*23*	422	469	516	563	610	657	704	797
258	310	361	413	*24*	464	516	568	619	671	722	774	877
283	339	396	452	*25*	509	565	622	678	735	791	848	961
308	370	431	493	*26*	554	616	678	739	801	862	924	1047
335	401	468	535	*27*	602	669	736	803	870	937	1004	1137
362	434	507	579	*28*	652	724	796	869	941	1014	1086	1231
391	469	547	625	*29*	703	781	859	937	1015	1093	1172	1328
420	504	588	672	*30*	756	840	924	1008	1092	1176	1260	1428
451	541	631	721	*31*	811	901	991	1081	1171	1261	1352	1532
482	578	675	771	*32*	868	964	1060	1157	1253	1350	1446	1639
515	617	720	823	*33*	926	1029	1132	1235	1338	1441	1544	1749
548	658	767	877	*34*	986	1096	1206	1315	1425	1534	1644	1863
583	699	816	932	*35*	1049	1165	1282	1398	1515	1631	1748	1981
618	742	865	989	*36*	1112	1236	1360	1483	1607	1730	1854	2101
655	785	916	1047	*37*	1178	1309	1440	1571	1702	1833	1964	2225
692	830	969	1107	*38*	1246	1384	1522	1661	1799	1938	2076	2353
731	877	1023	1169	*39*	1315	1461	1607	1753	1899	2045	2192	2484
770	924	1078	1232	*40*	1386	1540	1694	1848	2002	2156	2310	2618
811	973	1135	1297	*41*	1459	1621	1783	1945	2107	2269	2432	2756
852	1022	1193	1363	*42*	1534	1704	1874	2045	2215	2386	2556	2897
895	1073	1252	1431	*43*	1610	1789	1968	2147	2326	2505	2684	3041
938	1126	1313	1501	*44*	1688	1376	2064	2251	2439	2626	2814	3189
983	1179	1376	1572	*45*	1769	1965	2162	2358	2555	2751	2948	3341
1028	1234	1439	1645	*46*	1850	2056	2262	2467	2673	2878	3084	3495
1075	1289	1504	1719	*47*	1934	2149	2364	2579	2794	3009	3224	3653
1122	1346	1571	1795	*48*	2020	2244	2468	2693	2917	3142	3366	3815
1171	1405	1639	1873	*49*	2107	2341	2575	2809	3043	3277	3512	3980
1220	1464	1708	1952	*50*	2196	2440	2684	2928	3172	3416	3660	4148
1271	1525	1779	2033	*51*	2287	2541	2795	3049	3303	3557	3812	4320
1322	1586	1851	2115	*52*	2380	2644	2908	3173	3437	3702	3966	4495
1375	1649	1924	2199	*53*	2474	2749	3024	3299	3574	3849	4124	4673
1428	1714	1999	2285	*54*	2570	2856	3142	3427	3713	3998	4284	4855
1483	1779	2076	2372	*55*	2669	2965	3262	3558	3855	4151	4448	5041
1538	1846	2153	2461	*56*	2768	3076	3384	3691	3999	4306	4614	5229
1595	1913	2232	2551	*57*	2870	3189	3508	3827	4146	4465	4784	5421
1652	1982	2313	2643	*58*	2974	3304	3634	3965	4295	4626	4956	5617
1711	2053	2395	2737	*59*	3079	3421	3763	4105	4447	4789	5132	5816
1770	2124	2478	2832	*60*	3186	3540	3894	4248	4602	4956	5310	6018

Number of Shingles Required for a Roof



Rule.—Multiply the length of the ridge pole by twice the length of one rafter, and, if the shingles are to be exposed $4\frac{1}{2}$ inches to the weather, multiply by 8, and if exposed 5 inches to the weather, multiply by $7\frac{1}{5}$, and you have the number of shingles.

NOTE.—Shingles are 16 inches long, and average about 4 inches wide. They are put up in bundles of 250 each.

One bundle 16-inch shingles will cover 30 square feet.

One bundle 18-inch shingles will cover 33 square feet.

When laid 5 inches to the weather, 5 pounds 4-penny or $3\frac{3}{4}$ pounds 3-penny nails will lay 1,000 shingles.

Slating

The thickness of slates ranges from $\frac{3}{16}$ to $\frac{5}{16}$ of an inch, and their weight varies from 2.6 to 4.5 lbs. per square foot.

The *lap* of slates varies from 2 to 4 inches. The standard is assumed to be 3 inches.

Rule for computing the number of slates of a given size required per square.—Subtract 3 inches from the length of the slate, multiply the remainder by the width and divide by 2. Divide 14.400 by the number so found, and the result will be the number of slates required.

Dimensions of Slates and Numbers Required to a Square

12×6 requires 533 to the square; 14×9 requires 291; 18×9 requires 213; 24×13 requires 105.

Number of Laths for a Room

Laths are 4 feet long and $1\frac{1}{2}$ inches wide, and 16 laths are generally estimated to the square yard.

Rule.—Find the number of square yards in the room and multiply by 16, and the result will equal the number of laths necessary to cover the room.

To find the number of square yards in a ceiling or wall, multiply the length by the width or height (in feet) and divide the product by 9; the result will be the square yards.

Explanation—Opposite any number of feet in the left hand column will be found the amount at any price given at the top. Thus: 88 feet at $4.50 per cord=$3.09.

Ft.	$1.50	$1.75	$2.00	$2.25	$2.50	$2.75	$3.00	$3.25	$3.50	$4.00	$4.50	$5.00	$5.50	$6.00
1	.01	.01	.01	.02	.02	.02	.02	.02	.02	.03	.03	.03	.04	.04
2	.02	.02	.03	.03	.04	.04	.05	.05	.05	.06	.07	.07	.08	.09
3	.03	.04	.04	.05	.06	.06	.07	.07	.08	.09	.10	.11	.12	.14
4	.05	.06	.06	.07	.08	.09	.09	.10	.10	.12	.14	.15	.17	.18
5	.06	.07	.08	.09	.10	.11	.12	.13	.13	.15	.17	.19	.21	.23
6	.07	.08	.09	.11	.12	.13	.14	.15	.16	.18	.21	.23	.25	.28
7	.08	.10	.11	.12	.14	.15	.16	.17	.19	.21	.24	.27	.30	.32
8	.09	.11	.12	.14	.16	.18	.19	.20	.21	.24	.28	.31	.34	.37
16	.19	.22	.25	.28	.31	.35	.37	.40	.43	.49	.56	.62	.68	.74
24	.28	.33	.37	.42	.47	.52	.56	.61	.65	.75	.84	.93	1.03	1.12
32	.38	.44	.50	.56	.63	.69	.75	.81	.87	1.00	1.12	1.25	1.37	1.50
40	.47	.55	.63	.70	.78	.86	.94	1.02	1.09	1.25	1.40	1.56	1.72	1.87
48	.56	.66	.75	.84	.94	1.03	1.12	1.22	1.31	1.50	1.68	1.87	2.06	2.25
56	.61	.77	.88	.98	1.09	1.20	1.31	1.42	1.53	1.75	1.96	2.18	2.40	2.62
64	.75	.88	1.00	1.13	1.25	1.38	1.50	1.62	1.75	2.00	2.25	2.50	2.75	3.00
72	.84	.98	1.13	1.27	1.41	1.55	1.69	1.83	1.96	2.25	2.53	2.81	3.09	3.37
80	.94	1.09	1.25	1.41	1.56	1.72	1.88	2.03	2.18	2.50	2.81	3.13	3.43	3.74
84	.98	1.15	1.31	1.48	1.64	1.81	1.97	2.13	2.29	2.62	2.95	3.28	3.60	3.94
88	1.03	1.20	1.38	1.55	1.72	1.89	2.06	2.23	2.40	2.75	3.09	3.43	3.78	4.12
92	1.08	1.26	1.44	1.62	1.80	1.98	2.15	2.33	2.51	2.87	3.23	3.59	3.95	4.30
96	1.13	1.31	1.50	1.69	1.88	2.06	2.25	2.44	2.62	3.00	3.37	3.75	4.12	4.49
104	1.22	1.42	1.63	1.88	2.03	2.23	2.44	2.64	2.84	3.25	3.65	4.05	4.47	4.78
112	1.31	1.53	1.75	1.97	2 19	2.41	2.62	2.84	3.06	3.50	3.93	4.38	4.80	5.24
120	1.41	1.64	1.88	2.11	2.34	2.58	2.81	3.05	3.28	3.75	4.21	4.63	5.15	5.62
128	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	4.00	4.50	5.00	5.50	6.00

Number of Cords in a Pile of Wood

A cord of wood is a pile 8 feet long, 4 feet wide and 4 feet high and contains 128 cubic feet.

Rule.—Multiply the length in feet by the width in feet and that result by the length in feet and divide the product by 128 and you have the number of cords.

Example.—How many cords in a pile of wood 4 feet wide, 7 feet high, 24 feet long?

Solution.—$4\times7\times24=672$ cubic feet. $672\div128=5\frac{1}{4}$ cords. Ans.

To Find the Day of the Week on Which Any Date Will Occur, or Has Occurred Since the Beginning of the Christian Era.

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There are many methods and tables for finding the day of the week of any given date. It will be found that the most of these cover only a limited number of years, and some are erroneous. Especially the latter is liable to be true when dates prior to September 14th, 1752, are involved, few of the methods being at all applicable before that date. The method given below covers an unlimited number of centuries, and will be found correct for all dates on and after January first, year one, A. D.

INDEX FOR THE CENTENNIAL YEARS:

00	6
100	5
200	4
300	3
400	2
500	1
600	0
700	6
800	5
900	4
1000	3
1100	2
1200	1
1300	0
1400	6
1500	5
1600	4
1700 (to Sept. 2, 1752)	3
1700 (on and after Sept. 14, 1752.)*	6
1800	4
1900	2
2000	1
2100	6
2200	4
2300	2
2400	1

INDEX FOR THE MONTHS:

January (leap year 5)	6
February (leap year 1)	2
March	2
April	5
May	0
June	3
July	5
August	1
September	4
October	6
November	2
December	4

*There were no dates between September 2nd and September 14th, 1752, on account of the changes made when the Gregorian Calendar was introduced, on the latter date.

This table may be indefinitely extended by giving the same index to every fourth succeeding centennial year. For example, the index for 2100 is 6, and the index for 2500 is 6; for 2200 it is 4, for 2600 it is 4, and so on indefinitely.

NOTE:—To ascertain the day on which any date occurs, add the number of years and the number of leap years since the preceding centennial year, the day of the month, the index for the month, and the centennial index. Divide this by seven and the remainder will be the day of the week, counting Sunday as the first day; if there is no remainder the day is Saturday.

Example 1.—On what day of the week was Washington born, February 22nd, 1732? (New style), Feb. 11, (old style).

We must use Feb. 11 instead of Feb. 22nd in this computation, as the above method applies only to old style dates until the change in

the above calendar was made. The year 1732 was a leap year; hence, the index for the month is 1, while the index for the century is 3.

32, the year.
8, the number of leap years.
11, the day of the month.
1, index for the month (leap year).
3, centennial index.

7)55

7—6 remainder—Friday.

Example II.—On what day of the week will July 4th, 1926 occur?

26, the year.
6, number of leap years.
4, day of the month.
5, index for the month.
2, centennial index.

7)43

6—1 remainder—Sunday.

Largest Libraries in the World.

Libraries.	No. of Vols.*
Bibliothèque National, Paris	3,000,000
British Museum, London	2,000,000
Imperial Library, St. Petersburg	1,500,000
New York Public Library	1,254,242
Royal Library, Berlin	1,000,000
Library of Congress, Washington	1,000,000
Harvard University Library	910,000
Strasburg University, France	700,000
Imperial Library, Vienna	600,000
New York State Library	567,015
Royal Library, Munich	550,000
Bodleian Library, Oxford	550,000
Leipsic University	500,000
New York City Library	500,000
Royal Library, Copenhagen	500,000
Stuttgart University Library	500,000
Biblioteca National, Madrid	500,000

*Including pamphlets.

Largest Libraries of the United States.

The following returns from the Report of the United States Bureau of Education represent all libraries in 1900 (except the New York Public Library, the figures of which are for 1904, and the Brooklyn Public Library, 1905) having over 200,000 volumes:

Libraries.	Volumes.	Pamphlets.
New York Public Library†	1,013,905	240,337
Congressional Library	*1,000,000	.....
Boston Public Library	*772,432	.....
Harvard University	560,000	350,000
Brooklyn Public Library (905)	423,993	.....
New York State Library	423,290	143,725
University of Chicago	329,778	150,000
Columbia University	295,000	15,000
Yale University	285,000	100,000
Mercantile Library, New York	*262,043	.....
Chicago Public Library	*258,498	.....
Cornell University	225,022	36,600
Philadelphia Free Library	*207,585	.....
Cincinnati Public Library	203,684	27,208
Enoch Pratt Free, Baltimore	202,118	15,000
Philadelphia Library Company	201,184	31,000

*Including pamphlets. †Astor, Lenox, and Tilden foundations.

RULES FOR PAINTING

Usually one-fourth of a pound of paint is allowed for each square yard for the first coat, and one-sixth of a pound for each additional coat. One pound of stopping should be allowed for every 20 square yards.

A gallon of tar and 1 pound of pitch will cover about 12 square yards the first coat, and 17 yards each additional coat.

Priming consists of white lead and linseed oil.

Knotting consists of red lead and size.

Putty consists of Spanish whiting and linseed oil.

White Paint.—Twenty-eight pounds white lead, 6 pints linseed oil, 2 pints turpentine and 1 pound litharge, will cover about 100 square yards.

Black Paint.—Twenty-eight pounds black paint, 10 pints linseed oil, 2 pints turpentine, and 1 pound litharge, will cover about 160 square yards.

Distemper.—One hundred and twelve pounds whiting, 28 pounds dry white lead, and 7 pounds glue, mixed with boiling water.

With ordinary paints, new wood and iron work require four coats, including the priming coat, but exclusive of any flatting coats.

Old paint requires two coats for inside and three for outside work.

The following are the superficial yards which a fixed amount of material will cover in each coat, arrived at from actual measurement of work done with materials issued from store.

First Coat, or Priming

10 lbs. white lead,
1 oz. red lead,
2 oz. litharge,*
4 pints linseed oil.
} 63 superficial yards.

Second Coat

10 lbs. white lead,
2 oz. litharge,*
2½ pints linseed oil,
1½ pints spirits of turpentine.
} 100 superficial yards.

Third and Fourth Coats

10 lbs. white lead,
2 oz. litharge,*
2 pints linseed oil,
2 pints spirits of turpentine.
} 113 superficial yards.

*Or ½ oz. burnt white vitriol, and 1½ oz. of litharge.

For outside work, when exposed to the sun, more turpentine should be used to prevent the paint from blistering, and only boiled linseed oil should be used. For inside work raw linseed may be used, but the less oil the less gloss. For the flatting coat, the color being ground in oil, only turps is added. For colored paints, the last two coats have the color added to the composition in the proportion of 1 to 2 pounds for every 10 yards of surface to be painted; and the quantity of white lead is reduced in proportion.

TO MIX INKS OR PAINTS FOR TINTS

A larger quantity of the first-named color must always be used.
Dark green and purple make bottle green.
White and medium yellow make buff tint.
Red, black and blue make dark brown.
Bronze blue, lemon yellow and black make dark green.
White, medium yellow and black make drab tint.
White, lake and lemon yellow make flesh tint.
Lemon yellow and bronze blue make grass green.
White and black make gray tint.
White and purple make lavender tint.
Red, black and medium yellow make maroon.
Lake and purple make magenta.
Medium yellow and purple make olive green.
Medium yellow and red make orange.
White, ultramarine blue and black make pearl tint.
White and lake make pink.
Ultramarine blue and lake make purple.
Orange, lake and purple make russet.
Medium yellow, red and white make sienna.
White and ultramarine blue make sky blue.
Ultramarine blue, black and white make slate.
Vermilion and black make Turkey red.
White, yellow, red and black make umber.

How to Mix Paints of Simple Colors to Produce Various Tints

Buff.—White lead and yellow ocher.

Chestnut.—Light red and black.

Cream Color.—Same as for buff, but with more white.

Chocolate.—Black, with Spanish brown, or Venetian red.

Drab.—White lead, burnt umber, and a little yellow ocher (warm); white lead, raw umber, and a little black (cool).

Fawn Color.—Same as for flesh color, with stone ocher instead of lake.

Flesh Color.—Lake, white lead, and a little vermilion.

French Gray.—White lead with Prussian blue and a little lake.

Gold Color.—Chrome yellow with a little vermilion and white lead; or Naples yellow and realgar.

Gray (common).—White lead and a little black.

Lead Color.—White lead with black or indigo.

Lemon Color.—Chrome yellow and white lead; more of the first than in straw color.

Lilac.—Same as for French gray, but with less white.

Mahogany Color.—A little black with purple brown or Venetian red.

Oak Color.—White lead with yellow ocher and burnt umber.

Olive.—Black, yellow, and a little blue; or yellow, pink, lamp-black, and a little verdigris.

Olive Green.—Prussian blue and raw umber.

Orange.—Chrome yellow and vermilion (bright), yellow ocher and red lead (duller).

Pea Green.—White lead and Brunswick green; or white lead, Prussian blue, and some chrome yellow.

Peach Color.—White lead, with vermilion, Indian red, or purple brown.

Pearl Gray.—White lead, with a little black, and a little Prussian blue or indigo.

Purple.—White lead, vermilion, indigo or black, rich, dark red or colors for French gray.

Sage Green.—Prussian blue, raw umber, and a little ocher, with a little white.

Salmon Color.—Venetian red and white lead.

Silver Gray.—Same as for pearl gray.

Sky Blue.—White lead, Prussian blue, and a little lake.

Stone Color.—White lead and yellow ocher, with a little burnt or raw umber.

Stone Color (gray).—White lead, and a small quantity of black.

Straw Color.—Chrome yellow and white lead.

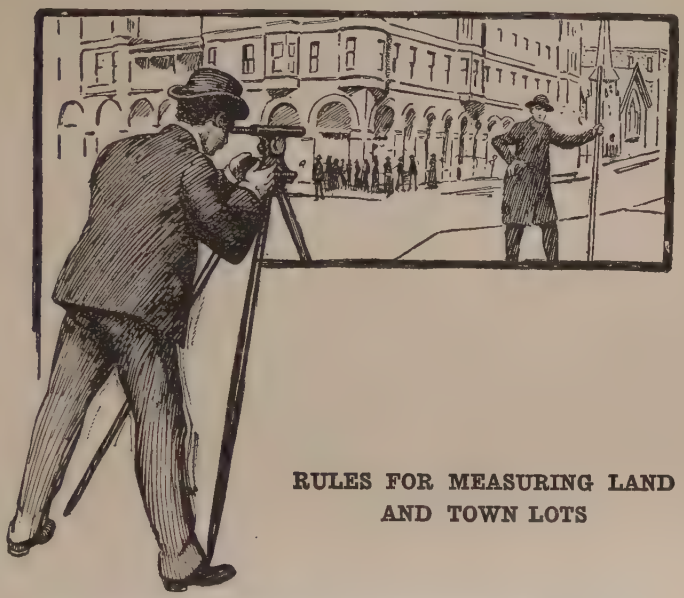
Violet.—Vermilion, white lead, and indigo or black.

PART XIV

Miscellaneous Statistics, Carpentering, Test Questions, etc.

E. T. ROE, LL. B.
For Twenty Years U. S. District Attorney
Noted Author and Compiler

VALUABLE MISCELLANEOUS MATTER



RULES FOR MEASURING LAND AND TOWN LOTS

To find the number of acres in a rectangular piece of land.

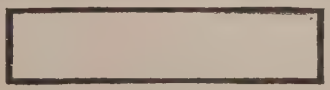


FIG. 1

Rule.—Multiply the length in rods by the breadth in rods, and divide by 160.

TRIANGULAR PIECES

When the triangle is a right-angled triangle.

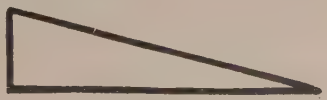


FIG. 2

Rule.—Multiply the width by the length and divide by 2.

Example.—How many acres of land in a triangular field 60 rods long and 40 rods wide?

OPERATION

$60 \times 40 \div 2 = 1{,}200$ sq. rods. $1{,}200 \div 160 = 7\frac{1}{2}$ acres.

WHERE THE TRIANGLE IS NOT A RIGHT ANGLED TRIANGLE

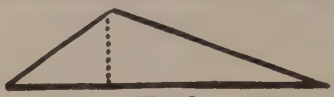


FIG. 3

If a triangle is without a right angle, a perpendicular has to be found.

Rule.—Multiply the base in rods by the perpendicular height in rods, and divide by 2, and you have the area in square rods.

Example.—How many acres in a triangular field whose base or side is 140, and its width (perpendicular height) is 60 rods?

OPERATION

$140 \times 60 \div 2 = 4{,}200$ sq. rods.
$4{,}200 \div 160 = 26\frac{1}{4}$ acres. *Ans.*

To find the area of a piece of land when only two of the oppoiste sides are parallel.

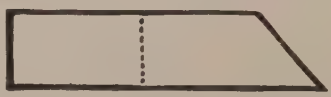


FIG. 4

Rule.—Add the two parallel sides together, and divide by 2, and you have the average length. Then multiply the width in rods by the length in rods and divide by 160, and you have the number of acres.

Example.—How many acres of land in a field, the two parallel sides of which are 80 and 120 rods long, and 50 rods wide?

OPERATION

$80 + 120 \div 2 = 100$ rods.
$100 \times 50 \div 160 = 31\frac{1}{4}$ acres. *Ans.*

To Lay Off Small Lots of Land

Farmers and gardeners often find it necessary to lay off small portions of land for the purpose of experimenting with different crops, fertilizers, etc. To such the following rules will be helpful:

One acre contains 160 sq. rods. or 4,840 sq. yards, or 43,560 sq. feet. To measure off one acre it will take $208\frac{7}{10}$ feet each way.

One-half acre it will take 147½ feet each way. One-third acre it will take 120½ feet each way. One-fourth acre it will take 104⅜ feet each way. One-eighth acre it will take 73¾ feet each way.

To Measure Town Lots

Rule.—Multiply the length in feet by the width in feet and divide the result by 43,560 and you will have the fractional part of an acre in the lot.

Example.—What part of an acre is there in a lot 100 feet deep and 75 feet wide?

Solution.—$100 \times 75 = 7{,}500$ sq. feet.

$$\frac{7{,}500}{43{,}560} = \text{or about 1-6 of an acre.}$$

To Find the Number of Acres in a Given Number of Square Rods

Rule.—Remove the decimal point two places to the left in the number of square rods, divide by 8 and multiply by 5, and you have the number of acres.

Example.—How many acres in a piece of land 80 rods long and 40 rods wide? $80 \times 40 = 3200$. 3200 with the point removed equals $32.00 \div 8 = 4 \times 5 = 20$ acres.

FACTS ABOUT MONEY

Absolutely pure gold is 24 carats fine.

Many Roman tin coins are known to be in existence.

The gold coins of Great Britain contain one-twelfth alloy.

The Spartans had an iron coinage, no other being allowed.

The United States silver 3c. piece was first coined in 1851.

The English mint was established by Atelstane about 928.

From 1828 to 1845 platinum coins were minted in Russia.

The first coining machine was invented by Bruchner in 1553.

The notes used by the Bank of England cost exactly 1c each.

Julius Cæsar was the first man to put his own image on a coin.

Aristotle says that "money exists not by nature but by law."

The first colonial coinage was minted in Massachusetts in 1652.

In the tenth century there were thirty-eight mints in England.

The American cents of 1787 bore the motto "Mind Your Business."

The Lydians were the first to coin money, about B. C. 1600.

Homer mentions brass money as in use B. C. 1184, among the Greeks.

Brass money was coined in Rome by Servius Tullius as early as 573 B. C.

During the reign of Henry VIII., 23 to 25 per cent. of coin metal was alloy.

The most ancient coins are of electrum, four parts of gold to one of silver.

The coinage of 20c. pieces began in 1875, and was discontinued in 1878.

The coinage of trade dollars began in 1874, and was discontinued in 1878.

Before the days of coined money the Greeks used copper nails as currency.

Herodotus says that Crœus was the first sovereign to make coins of gold.

In 1503 the first English shilling was minted. It bore the king's image.

TABLE SHOWING THE VALUE OF FOREIGN COINS AND PAPER NOTES IN AMERICAN MONEY BASED UPON THE VALUES EXPRESSED IN TABLE SHOWN ON PAGE 418

Number.	British £ Sterling.	German Mark.	French Franc, Italian Lira.	Chinese Tael (Shanghai).	Dutch Florin.	Indian Rupee.	Russian Gold Ruble.	Austrian Crown.
1	$4.86,6½	$0.23,8	$0.19,3	$0.60,2	$0.40,2	$0.32,4	$0.51,5	$0.20,3
2	9.73,3	0.47,6	0.38,6	1.20,4	0.80,4	0.64,8	1.03	0.40,6
3	14.59,9½	0.71,4	0.57,9	1.80,6	1.20,6	0.97,2	1.54,5	0.60,9
4	19.46,6	0.95,2	0.77,2	2.40,8	1.60,8	1.29,6	2.06	0.81,2
5	24.33,2½	1.19	0.96,5	3.01	2.01	1.62	2.57,5	1.01,5
6	29.19,9	1.42,8	1.15,8	3.61,2	2.41,2	2.04,4	3.09	1.21,8
7	34.06,5½	1.66,6	1.35,1	4.21,4	2.81,4	2.36,8	3.60,5	1.42,1
8	38.93,2	1.90,4	1.54,4	4.81,6	3.21,6	2.59,2	4.12	1.62,4
9	43.79,8½	2.14,2	1.73,7	5.41,8	3.61,8	2.91,6	4.63,5	1.82,7
10	48.66,5	2.38	1.93	6.02,2	4.02	3.24	5.15	2.03
20	97.33	4.76	3.86	12.04	8.04	6.48	10.30	4.06
30	145.99,5	7.14	5.79	18.06	12.06	9.72	15.45	6.09
40	194.66	9.52	7.72	24.08	16.08	12.96	20.60	8.12
50	243.32,5	11.90	9.65	30.10	20.10	16.20	25.75	10.15
100	486.65	23.80	19.30	60.20	40.20	32.40	51.50	20.30

VALUE OF FOREIGN COINS IN UNITED STATES MONEY

(Proclaimed by the Secretary of the Treasury, October 1, 1903.*)

Country.	Standard	Monetary Unit.	Value in U. S. Gold Dollar.	Coins.
Argentine Republic	Gold	Peso	$0.96,5	Gold: argentine ($4.82,4) and ½ argentine. Silver: peso and divisions.
Austria-Hungary	Gold	Crown	.20,3	Gold: former system—4 florins ($1.92,9), 8 florins ($3.85,8), ducat ($2.28,7), and 4 ducats ($9.14,9). Silver: 1 and 2 florins. Gold: present system—20 crowns ($4.05,2) and 10 crowns ($2.02,6).
Belgium	Gold	Franc	.19,3	Gold: 10 and 20 francs. Silver: 5 francs.
Bolivia	Silver	Boliviano	.40,8	Silver: boliviano and divisions.
Brazil	Gold	Milreis	.54,6	Gold: 5, 10, and 20 milreis. Silver: ½, 1, and 2 milreis.
Canada	Gold	Dollar	1.00	
Central America	Silver	Peso†	.40,8	Silver: peso and divisions.
Chile	Gold	Peso	.36,5	Gold: escudo ($1.82,5), doubloon ($3.65), and condor ($7.30). Silver: peso and divisions.
China	Silver	Tael‡ Shanghai	.60,2	
		Tael‡ Tientsin	.63,9	
		Tael‡ Canton	.65,7	
Colombia	Silver	Peso	.40,8	Gold: condor ($9.64,7) and double-condor. Silver: peso.
Costa Rica	Gold	Colon	.46,5	Gold: 2, 5, 10, and 20 colons ($9.30,7). Silver: 5, 10, 25, and 50 centimos.
Cuba	Gold	Peso	.92,6	Gold: doubloon ($5.01,7); Alphonse ($4.82,3). Silver: peso.
Denmark	Gold	Crown	.26,8	Gold: 10 and 20 crowns.
Ecuador	Silver	Sucre	.48,7	Gold: 10 sucres ($4.86,65). Silver: sucre and divisions.
Egypt	Gold	Pound (100 piasters)	.94,3	Gold: pound (100 piasters), 5, 10, 20, and 50 piasters. Silver: 1, 2, 5, 10, and 20 piasters.

VALUE OF FOREIGN COINS IN UNITED STATES MONEY.—Continued

Country.	Standard	Monetary Unit	Value in U. S. Gold Dollar.	Coins.
France	Gold	Franc	.19,3	Gold: 5, 10, 20, 50, and 100 frs. Silver: 5 frs.
Germany	Gold	Mark	.23,8	Gold: 5, 10, and 20 marks.
Great Britain	Gold	Pound Sterling	4.86,6½	Gold: sovereign (pound sterling) and ½ sov'gn.
Greece	Gold	Drachma	.19,3	Gold: 5, 10, 20, 50, and 100 drachmas. Silver: 5 drachmas.
Hayti	Gold	Gourde	.96,5	Gold: 1, 2, 5, and 10 gourdes. Silver, gourde and divisions.
India	Gold	Pound Sterling§.	4.86,6½	Gold: sov. ($4.86,65). Sil.: rupee and div'ns.
Italy	Gold	Lira	.19,3	Gold: 5, 10, 20, 50, and 100 lire. Silver: 5 lire.
Japan	Gold	Yen	.49,8	Gold: 1, 2, 5, 10, and 20 yen. Silver: 10, 20, and 50 sen.
Mexico	Silver	Dollar	.44,3	Gold: dollar ($0.98,3), 2½, 5, 10, and 20 dollars. Silver: dollar (or peso) and divisions.
Netherlands	Gold	Florin	.40,2	Gold: 10 florins. Silver: ½, 1, and 2½ florins.
Newfoundland	Gold	Dollar	1.01,4	Gold: 2 dollars ($2.02,7).
Norway	Gold	Crown	.26,8	Gold: 10 and 20 crowns.
Peru	Gold	Sol	.48,7	Gold: libra ($4.86,65). Sil.: sol and divisions.
Portugal	Gold	Milreis	1.08	Gold: 1, 2, 5, and 10 milreis.
Russia	Gold	Ruble	.51,5	Gold: imperial ($7.71,8) and ½ imperial, 7½ rubles ($3.86). Silver: ¼, ½, and 1 ruble.
Spain	Gold	Peseta	.19,3	Gold: 25 pesetas. Silver: 5 pesetas.
Sweden	Gold	Crown	.26,8	Gold: 10 and 20 crowns.
Switzerland	Gold	Franc	.19,3	Gold: 5, 10, 20, 50, and 100 francs. Silver: 5 francs.
Turkey	Gold	Piaster	.04,4	Gold: 25, 50, 100, 250, and 500 piasters.
Uruguay	Gold	Peso	1.03,4	Gold: peso. Silver: peso and divisions.
Venezuela	Gold	Bolivar	.19,3	Gold: 5, 10, 20, 50, and 100 bolivars. Silver: 5 bolivars.

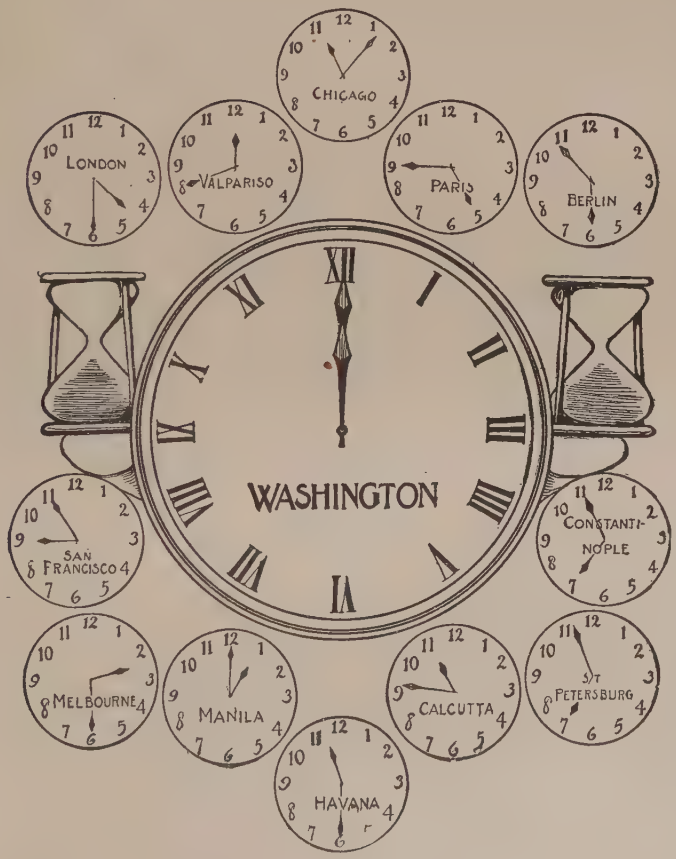
* The coins of silver-standard countries are valued by their pure silver contents, at the average market price of silver for the three months preceding the date of this circular. † Not including Costa Rica. ‡ The British dollar has the same value as the Mexican at Hong Kong and the Straits Settlement. § The sovereign is the standard coin of India, but the rupee ($0.32,4) is the money of account, current at 15 to the sovereign.

Miscellaneous Table of Things, Distances, Books, Etc.

A book composed of sheets folded into 2 leaves is a folio.
A book composed of sheets folded into 4 leaves is a quarto.
A book composed of sheets folded into 8 leaves is an octavo (8vo).
A book composed of sheets folded into 12 leaves is a duodecimo (12mo).
A book composed of sheets folded into 16 leaves is a 16mo.

12 units make 1 dozen.
12 dozen make 1 gross.
12 gross (144 dozen) make 1 great gross.
20 units make 1 score.
56 pounds of butter make 1 firkin.
100 pounds of fish make 1 quintal.
196 pounds of flour make 1 barrel.
200 pounds of beef, pork, shad or salmon make 1 barrel.
24 sheets of paper make 1 quire.
20 quires make 1 ream.
2 reams make 1 bundle.
5 bundles make 1 bale.
3 barleycorns make 1 inch.
18 inches make 1 cubit.
22 inches make 1 sacred cubit.
9 gallons make 1 English firkin.
2 firkins make 1 kilderkin.
2 kilderkins make 1 barrel.
25 pounds make 1 keg (powder).
100 pounds make 1 cental (grain measure).
100 pounds make 1 cask (raisin measure).
256 pounds make 1 barrel of soap.
280 pounds make 1 barrel of salt.
31½ gallons make 1 barrel (wine measure).
42 gallons make 1 tierce (wine measure).
63 gallons make 1 hogshead (wine measure).
84 gallons make 1 puncheon (wine measure).
126 gallons make 1 pipe (wine measure).
252 gallons make 1 tun (wine measure).
8 bushels of wheat (of 70 lbs. each) make 1 quarter (European measure).
8 bushels of salt make 1 hogshead.
36 bushels of coal make 1 chaldron (English).
32 bushels make 1 chaldron (American).
14 pounds make 1 stone.
21½ stones make 1 pig (iron).
8 pigs make 1 fother.
24¾ cubic feet (masonry) make 1 perch.
100 square feet (carpentry) make 1 square.
1,760 yards (5,280 feet) make 1 statute mile.
2,028.63 yards (6,085.9 feet) make 1 nautical mile.
3 miles make 1 league.
69½ statute miles make 1 degree (of latitude).
60 geographical miles make 1 degree (of latitude).
360 degrees make 1 circle.
60 pairs of shoes make 1 case.
9 inches make 1 quarter (of a yard).
3 quarters make 1 ell (Flemish).
5 quarters make 1 ell (English).
6 quarters make 1 ell (French).
4 inches make 1 hand (measuring horses).
6 feet make 1 fathom (depth of water).
120 fathoms make 1 cable-length.
7⅓ cable-lengths make 1 mile.
640 acres make 1 square mile.
36 square miles make 1 township.
4 farthings make 1 penny (marked d).
12 pence make 1 shilling (marked s).
20 shillings make 1 pound (marked £).
21 shillings make 1 guinea.
5 shillings make 1 crown.

ILLUSTRATION SHOWING THE TIME IN PRINCIPAL CITIES OF THE WORLD, WHEN IT IS NOON IN WASHINGTON, D. C.



DISTANCES AND MAIL TIME TO FOREIGN CITIES FROM THE CITY OF NEW YORK

By Postal Route to—	Miles.	Days.
Adelaide, *via* San Francisco	12,845	30
Alexandria, *via* London	6,150	13
Amsterdam, *via* London	3,985	9
Antwerp, *via* London	4,000	9
Athens, *via* London	5,655	12
Bahia, Brazil	5,870	21
Bangkok, Siam, *via* San Francisco	12,990	43
Batavia, Java, *via* London	12,800	34
Berlin, *via* London	4,385	9
Bombay, *via* London	9,765	24
Bremen, *via* London	4,235	8
Buenos Ayres, *via* London	8,045	25
Buenos Ayres	8,045	25
Calcutta, *via* London	11,120	26
Cape Town, *via* London	11,245	27
Constantinople, *via* London	5,810	11
Florence, *via* London	4,800	10
Glasgow	3,375	10
Greytown, *via* New Orleans	2,810	7
Halifax, N. S.	645	2
Hamburg, *via* London	4,340	9
Hamburg, direct	4,820	9
Havana	1,413	3
Hong Kong *via* San Francisco	10,890	25
Honolulu, *via* San Francisco	5,645	13
Liverpool	3,540	8
London, *via* Queenstown	3,740	8
London, *via* Southampton	3,760	8
Madrid, *via* London	4,925	9
Melbourne, *via* San Francisco	12,265	32
Mexico City (Railroad)	3,750	5
Panama	2,355	7
Paris	4,020	8
Rio de Janeiro	6,204	23
Rome, *via* London	5,030	9
Rotterdam, *via* London	3,935	9
St. Petersburg, *via* London	5,370	10
Shanghai, *via* San Francisco	9,720	25
Stockholm, *via* London	4,975	10
Sydney, *via* San Francisco	11,570	31
Valparaiso, *via* Panama	5,910	37
Vienna, *via* London	4,740	10
Yokohama, *via* San Francisco	7,348	20

OCEAN DISTANCES

	Nautical Miles.	Statute Miles.
From New York to Queenstown	2,823	3,252
From New York to Liverpool	3,053	3,517
From New York to Havre	3,169	3,650.7
From New York to Gibraltar	3,204	3,691
From New York to Hamburg	3,600	4,147.2
From New York to Antwerp	3,370	3,882
From New York to Naples	4,190	4,826.9
From San Francisco to Honolulu	2,100	2,419
From Honolulu to Yokohama	3,400	3,196.8
From San Francisco to Shanghai	6,700	7,718.4
From San Francisco to Hong Kong	7,500	8,640
From San Francisco to Manila	6,215	7,160

Distances, Mail Time, Passenger Fares and Variations of Time between New York City and Principal Places in the United States

Names of Cities.	Miles by rail from N. Y.	Mail Time from N. Y		Railroad Fares from N. Y.	Time when it is 12noon at N. Y
		Hrs.	Min		
Albany, N. Y.	142	3	30	$3.10	12.01 P.M.
Atlanta, Ga	882	24	15	25.50	11.18 A.M.
Baltimore, Md.	188	6	..	6.20	11.50 A.M.
Boston, Mass.	217	7	..	6.00	12.12 P.M.
Buffalo, N. Y.	410	11	30	9.25	11.40 A.M.
Charleston, S. C.	804	21	15	24.00	11.36 A.M.
Chicago, Ill.	913	25	..	20.00	11.05 A.M.
Cincinnati, Ohio	744	23	..	18.00	11.18 A.M.
Cleveland, Ohio.	568	19	30	13.00	11.29 A.M.
Columbus, Ohio.	624	20	..	16.25	11.24 A.M.
Concord, N. H.	292	9	30	7.15	12.10 P.M.
Denver, Colo	1,930	60	30	59.75	9.57 A.M.
Des Moines, Iowa	1,257	37	30	31.20	10.42 A.M.
Detroit, Mich.	743	21	..	15.00	11.24 A.M.
Fort Wayne, Ind.	764	20	..	16.75	11.15 A.M.
Galveston, Tex	1,789	56	30	49.25	10.30 A.M.
Harrisburg, Pa	182	6	..	5.10	11.49 A.M.
Hartford, Conn.	112	4	..	2.65	12.05 P.M.
Indianapolis, Ind	808	23	.	19.00	11.12 A.M.
Kansas City, Mo.	1,302	38	15	32.75	10.37 A.M.
Leavenworth, Kan.	1,366	41	..	32.75	10.37 A.M.
Little Rock, Ark.	1,290	45	..	42.85	10.47 A.M.
Louisville, Ky.	854	30	..	22.00	11.14 A.M.
Memphis, Tenn.	1,163	40	..	32.00	10.55 A.M.
Milwaukee, Wis.	985	29	15	23.00	11.05 A.M.
Mobile, Ala.	1,230	35	30	40.75	11.04 A.M.
Montgomery, Ala	1,057	30	30	32.00	11 10 A.M.
Nashville, Tenn.	998	33	40	29.45	11.09 A.M.
New Orleans, La.	1,344	40	..	42.75	10.56 A.M.
Norfolk, Va	450	15	20	8.50	11.51 A.M.
Omaha, Neb.	1,383	43	..	36.00	10.32 A.M.
Philadelphia, Pa.	90	3	..	2.50	11.55 A.M.
Pittsburg, Pa	431	13	..	12.50	11.36 A.M.
Portland, Me.	325	12	..	9.00	12.15 P.M.
Providence, R. I.	189	6	..	5.00	12.10 P.M.
Richmond, Va.	344	11	15	12.85	11.46 A.M.
Sacramento, Cal	3,099	103	30	136.00	8.50 A.M.
St. Louis, Mo.	1,048	29	..	24.25	10.55 A.M.
St. Paul, Minn.	1,300	37	..	31.35	10.44 A.M.
Salt Lake City, Utah	2,452	71	30	115.50	9.28 A.M.
San Francisco, Cal	3,250	106	..	136.00	8.46 A.M.
Savannah, Ga	905	26	..	25.00	11.32 A.M.
Springfield, Ill.	1,059	35	..	24.00	10.58 A.M.
Trenton, N. J.	57	2	..	1.75	11.54 A.M.
Vicksburg, Miss.	1,288	50	..	39.25	10.53 A.M.
Washington, D. C.	228	6	30	7.50	11.48 A.M.
Wheeling, W. Va.	496	14	15	14.25	11.33 A.M.
Wilmington, Del.	117	5	..	3.10	11.54 A.M.

Note.—As the fares by railway are constantly varying, and time tables vary somewhat by different trains, the mail time and passenger fares above given are to be taken as approximately correct.

TABLE SHOWING DISTANCES AND RAILWAY FARES FROM CHICAGO TO ALL PRINCIPAL CITIES OF THE UNITED STATES AND CANADA.

(First-Class Fare only is Given.)

CITIES	MILES.	FARE.	CITIES	MILES.	FARE.
Akron.....O.	368	$ 8 50	Dunkirk.....N. Y.	500	$13 50
Albany.....N. Y.	804	16 65	Duluth.....Minn.	478	13 55
Albuquerque.....N. M.	1,391	43 00	Elgin.....Ill.	36	1 10
Allegheny City.....Pa.	467	12 00	Erie.....Pa.	452	12 65
Allentown.....Pa.	916	18 00	Evansville.....Ind.	287	8 65
Alliance.....O.	385	9 70	Fall River.....Mass.	1,042	19 82
Altoona.....Pa.	686	15 50	Fargo.....N. D.	645	18 48
Annapolis.....Md.	834	17 50	Fernandina.....Fla.	1,083	27 80
Atlanta.....Ga.	733	21 40	Fitchburg.....Mass.	954	19 00
Atlantic City.....N. J.	886	19 25	Fort Wayne.....Ind.	148	4 45
Atchison.....Kan.	556	12 50	Forest.....O.	239	7 15
Augusta.....Me.	1,182	22 50	Fort Scott.....Kan.	557	14 60
Augusta.....Ga.	905	25 70	Fort Worth.....Tex.	957	26 95
Aurora.....Ill.	37	1 12	Frankfort.....Ky.	368	9 96
Austin.....Tex.	987	32 10	Freeport.....Ill.	114	3 32
Bangor.....Me.	1,263	24 50	Galveston.....Tex.	1,152	32 50
Baltimore.....Md.	792	17 50	Galesburg.....Ill.	164	4 88
Battle Creek.....Mich.	164	4 14	Gettysburg.....Pa.	771	17 50
Bay City.....Mich.	296	8 72	Grand Rapids.....Mich.	215	5 40
Bellaire.....O.	469	11 00	Grenada.....Miss.	618	18 74
Berlin.....Ont.	445	10 60	Green Bay.....Wis.	198	5 95
Birmingham.....Ala.	652	19 75	Greenville.....Tex.	905	26 10
Boston.....Mass.	1,004	19 00	Hamilton.....Can.	472	11 50
Bridgeport.....Conn.	968	19 69	Hamilton.....O.	238	8 05
Buffalo.....N. Y.	523	12 00	Hannibal.....Mo.	329	7 25
Burlington.....Ia.	207	6 17	Harrisburg.....Pa.	716	17 25
Burlington.....Vt.	1,095	21 19	Hartford.....Conn.	961	19 50
Cairo.....Ill.	365	10 94	Hastings.....Neb.	638	17 15
Canton.....O.	367	9 15	Haverhill.....Mass.	1,034	19 75
Cape May.....N. J.	903	20 00	Helena.....Mont.	1,562	46 50
Cedar Rapids.....Ia.	271	6 85	Hot Springs.....Ark.	686	20 25
Charleston.....S. C.	1,103	26 30	Holly Springs.....Miss.	543	15 85
Chattanooga.....Tenn.	595	17 30	Houston.....Tex.	1,102	31 00
Cheyenne.....Wyo.	1,000	28 65	Hudson.....N. Y.	836	19 31
Cincinnati.....O.	300	8 00	Indianapolis.....Ind.	183	5 00
Cleveland.....O.	339	8 50	Iowa City.....Ia.	237	6 64
Columbus.....O.	314	8 35	Ithaca.....N. Y.	666	15 30
Council Bluffs.....Ia.	488	12 50	Jacksonville.....Fla.	1,083	27 80
Columbia.....S. C.	837	25 70	Jackson.....Miss.	730	22 00
Concord.....N. H.	763	19 00	Jackson.....Mich.	209	5 50
Corsicana.....Tex	975	28 25	Janesville.....Wis.	91	2 73
Crestline.....O.	280	8 00	Jefferson City.....Mo.	376	11 05
Dallas.....Tex.	760	26 95	Joliet.....Ill.	37	1 05
Davenport.....Ia.	183	5 02	Kalamazoo.....Mich.	141	4 00
Dayton.....O.	265	7 27	Kansas City.....Mo.	458	12 50
Decatur.....Ill.	170	4 46	Keokuk.....Ia.	250	7 15
Denver.....Colo.	1,118	30 65	Knoxville.....Tenn.	566	16 00
Des Moines.....Ia.	337	10 15	La Crosse.....Wis.	280	7 86
Detroit.....Mich.	211	7 25	Lake Geneva.....Wis.	85	2 40
Dover.....Del.	921	19 70	Lancaster.....Pa.	754	18 25
Dubuque.....Ia.	188	5 64	Lansing.....Mich.	200	5 05

Note.—As the fares by railway are constantly changing, and time tables vary somewhat by different trains, the distance and

CITIES	MILES.	FARE.	CITIES	MILES.	FARE.
Leadville.....Colo.	1,169	$37 50	Quincy.....Ill.	262	$7 25
Leavenworth.....Kan.	589	12 50	Racine.....Wis.	62	1 85
Lexington.....Ky.	376	10 40	Raleigh.....N. C.	1,154	27 35
Lincoln.....Neb.	552	14 40	Richmond.....Ind.	223	6 75
Little Rock.....Ark.	628	17 85	Richmond.....Va.	381	21 00
Logansport.....Ind.	116	3 50	Rockford.....Ill.	86	2 50
Long Branch.....N. J.	914	20 00	Rochester.....N. Y.	550	13 38
London.....Can.	399	9 25	Rock Island.....Ill.	181	4 97
Los Angeles.....Cal	2,266	62 50	Rome.....N. Y.	711	15 76
Lyons.....Ia.	137	4 27	San Antonio.....Tex.	1,213	34 50
Madison.....Ind.	269	7 00	Saginaw.....Mich.	283	8 42
Madison.....Wis.	138	3 92	Sacramento.....Cal.	2,257	62 50
Manchester.....N. Y.	611	14 14	Salt Lake City....Utah.	1,566	42 25
Macon.....Ga.	821	24 05	Santa Fe.....N. M.	1,342	41 05
Manitowoc.....Wis.	162	4 87	Sandusky.....O.	307	8 25
Marquette.....Mich.	390	10 87	Savannah.....Ga.	1,088	26 30
Marshalltown.....Ia.	288	8 60	San Francisco.....Cal.	2,411	62 50
Memphis.....Tenn.	528	15 90	Seattle.....Wash.	2,215	61 50
Menominee.....Mich.	265	7 99	Sherman.....Tex.	871	25 35
Milwaukee.....Wis.	85	2 55	Shreveport.....La.	815	24 05
Minneapolis.....Minn.	402	11 50	Sioux City.....Ia.	510	12 75
Moline.....Ill.	165	4 92	Springfield.....O.	300	7 75
Montpelier.....Vt.	1,224	19 00	Springfield.....Ill.	185	4 75
Montgomery.....Ala.	793	21 00	Springfield.....Mass.	935	19 00
Mobile.....Ala.	973	22 00	Spokane Falls....Wash.	1,914	56 50
Montreal.....Can.	837	18 00	Steubenville.....O.	426	13 30
Muscatine.....Ia.	211	5 86	St. Louis.....Mo.	280	7 50
Nashville.....Tenn.	444	13 50	St. Paul.....Minn.	410	11 50
Nebraska City.....Neb.	498	13 00	St. Joseph.....Mo.	469	12 50
New York.....N. Y.	913	18 00	Syracuse.....N. Y.	673	14 98
New Haven.....Conn.	915	20 25	Tacoma.....Wash.	2,314	61 50
New Orleans.....La.	912	23 00	Tallahassee.....Fla.	1,033	27 80
Newark.....O.	365	8 35	Terre Haute.....Ind.	178	5 36
Newark.....N. J.	905	20 00	Texarkana.....Ark.	773	22 20
Newark.....N. Y.	927	18 00	Tiffin.....O.	254	7 40
Newport.....R. I.	1,044	20 32	Toledo.....O.	243	7 00
Newport.....Ky.	408	11 25	Topeka.....Kan.	508	14 00
Niagara Falls.....N. Y.	513	12 55	Toronto,.....Can.	506	12 40
Ogden.....Utah.	1,514	41 50	Trenton.....N. J.	859	18 00
Ogdensburg.....N. Y.	788	18 00	Troy.....N. Y.	826	16 80
Oil City.....Pa.	498	12 00	Urbana.....O.	267	8 05
Omaha.....Neb	497	12 75	Utica.....N. Y.	725	16 04
Ottawa.....Can.	757	18 00	Vicksburg.....Miss.	761	23 00
Pasadena.....Cal.	2,255	62 50	Vincennes.....Ind.	235	7 10
Paterson.....N. J.	969	18 00	Waco.....Tex.	1,031	28 80
Pensacola.....Fla.	955	22 00	Washington.....D. C.	819	17 50
Peoria.....Ill.	155	4 25	West Point.....N. Y.	916	18 00
Peru.....Ind.	132	3 85	Wheeling.....W. Va.	438	11 00
Philadelphia.....Pa.	822	18 25	White Mountains..N. H.	1,037	19 65
Pine Bluff.....Ark.	633	19 00	White Sul. Spgs...W.Va.	637	16 55
Pittsburg.....Pa.	468	11 00	Wilmington.....Del.	930	18 00
Portland.....Me.	1,114	20 50	Winona.....Minn.	306	8 62
Portland.....Ore.	2,329	61 50	Winnipeg.....Manitoba	845	25 70
Port Huron.....Mich.	335	7 30	Xenia.....O.	280	8 40
Portsmouth.....O.	413	10 25	Yankton.....S. D.	569	15 15
Pueblo.....Colo.	1,107	29 50	Youngstown.....O.	398	9 95
Pullman.....Ill.	14	15	Zanesville.....O.	390	9 00
Quebec.....Can.	1,107	21 00			

passenger fares above given are to be taken as approximately correct.

Line of Perpetual Snow

The line of perpetual snow varies with latitude, and is as follows in feet above sea-level.

Latitude	Feet	Latitude	Feet
0	15,260	40	9,000
10	14,764	50	6,334
20	13,478	60	3,818
30	11,484	70	1,278

Longest Rivers

	Miles
Missouri-Mississippi	4,194
Nile	4,020
Yang-Tze	3,158
Amazon	3,063
Yenisei	2,960
Amur	2,920
Congo	2,883

Deepest Seas

	Feet
Pacific Ocean, deepest	30,000
Atlantic	27,000
Southern	25,000
Indian	18,000
Arctic	9,000
Lake Baikal	4,080
Caspian Sea	3,600

A CENTURY OF PROGRESS

The nineteenth century received from its predecessors the horse. We bequeath the bicycle, the locomotive, and the automobile.

We received the goosequill, we bequeath the fountain pen and typewriter.

We received the scythe, we bequeath the mowing machine.

We received the sickle, we bequeath the harvester.

We received the hand printing press, we bequeath the Hoe cylinder press.

We received the painter's brush, we bequeath lithography, the camera, and color photography.

We received the hand-loom, we bequeath the cotton and woolen factory.

We received gunpowder, we bequeath nitro-glycerine.

We received twenty-three chemical elements, we bequeath eighty.

We received the tallow dip, we bequeath the arc light.

We received the galvanic battery, we bequeath the dynamo.

We received the flint lock, we bequeath automatic Maxims.

We received a sailing ship, we bequeath the steamship.

We received the beacon signal fire, we bequeath the telephone and wireless telegraphy.

We received leather fire-buckets, we bequeath the steam fire-engine.

APPORTIONMENT OF REPRESENTATIVES

In the Congress of the United States

UNDER—	Census.		Apportionment		Whole Number of Representatives.
	Year.	Population.	Year.	Ratio.	
Constitution	....	.....	1789	30,000	65
First Census	1790	3,929,214	1793	33,000	105
Second Census	1800	5,308,483	1803	33,000	141
Third Census	1810	7,239,881	1813	35,000	181
Fourth Census	1820	9,633,822	1823	40,000	213
Fifth Census	1830	12,866,020	1833	47,700	240
Sixth Census	1840	17,069,453	1843	70,680	223
Seventh Census	1850	23,191,876	1853	93,423	233
Eighth Census	1860	31,443,321	1863	127,381	243
Ninth Census	1870	38,558,371	1873	131,425	293
Tenth Census	1880	50,155,783	1883	151,911	325
Eleventh Census	1890	62,622,250	1893	173,901	356
Twelfth Census	1900	74,565,906	1901	194,182	386

Cost of War and Education

In some tables recently compiled the amount per capita expended by various governments for military and educational purposes is set down as follows:

	Military.	Education.		Military.	Education.
France	$4.00	$0.70	Bavaria	$2.38	$0.40
Prussia	2.04	.50	Denmark	1.76	.94
Russia	2.04	.03	Italy	1.52	.34
England	3.72	.62	Belgium	1.38	.46
Holland	3.58	.74	Austria	1.36	.32
Saxony	2.38	.38	Switzerland	.82	.84
Wurtemburg	2.38	.38	United States	.30	1.35

Troops in Wars of the United States

Wars.	Years.	Total troops.
Revolution	1775–1783	395,330
Northwest Indians	1790–1795	8,983
With France (Naval)	1798–1800	4,593
With Tripoli (Naval)	1801–1805	3,330
Creek Indians	1813–1814	13,781
War of 1812	1812–1815	528,274
Seminole Indians	1817–1818	5,911
Black Hawk Indians	1831–1832	5,031
Creek Indians	1836–1837	12,483
Cherokee troubles	1836–1837	3,926
Florida Indians	1835–1843	29,253
Aroostook troubles	1838–1839	1,500
Mexican	1846–1848	108,475
Apache, Navajo and Utah	1849–1855	2,561
Seminole Indians	1856–1858	3,687
Civil War	1861–1865	2,778,304
Spanish War	1898	298,913

COST OF WARS IN THE UNITED STATES

Revolutionary	$ 135,193,703.00
War of 1812–15	107,159,003.00
Mexican War	100,000,000.00
Rebellion	6,189,929,908.58
Estimated cost of Indian wars from July 4, 1776, to June 30, 1886	696,339,277.68
Spanish-American, including $20,000,000.00 for Philippine Islands	222,000,000.00

Losses in wars—

Revolution (English)	50,000	men
1812–15 killed and wounded	5,614	"
Mexican War	3,420	"
Rebellion, Union,—died	279,376	"
Rebellion, Confederate,—died	300,000	"
*Spanish-American, killed, wounded and died in camp	3,833	"

*These figures do not include those who died after being mustered out.

BLOODY BATTLES

The losses in the battle on the Yalu in the Japanese-Russian War were from 1,000 to 4,000 men on both sides. Compared with battles in the American Civil War, such losses are as "drops in a bucket." The figures in the following list of the bloodiest battles of the Civil War in the United States are from the "Statistical Record of the Armies of the United States," by Capt. Frederick Phisterer. They include killed, wounded and missing.

Battle.	Union.	Confederate.	Total.
Antietam	12,469	25,899	38,368
Atlanta	3,641	8,499	12,140
Bull Run, First	2,952	1,752	4,704
Bull Run, Second	7,800	3,700	11,500
Cedar Creek	5,995	4,200	10,195
Chancellorsville	16,030	12,281	28,311
Chickamauga	15,851	17,804	33,655
Cold Harbor	14,931	1,700	16,631
Corinth	2,359	9,433	11,782
Franklin	2,326	6,252	8,578
Fredericksburg	12,353	4,576	16,929
Gettysburg	23,186	31,621	54,807
Missionary Ridge, etc	5,616	8,684	14,300
Perryville	4,348	4,500	8,848
Shiloh	13,573	10,699	24,272
Stone River	11,578	14,560	16,138
Wilderness	18,387	11,400	29,787

STATES AND TERRITORIES OF THE UNION

Salaries and Terms of Governors, Areas, Dates of Admission, Thirteen Original States, Population in 1900 and 1910, and Electoral Vote

States and Territories	Governor's Salary	Governor's Trm. Yrs.	Area in Square Miles	When Admitted	Population in 1900	Population in 1910	Electoral Votes 1900	Electoral Votes 1908
Alabama	$5,000	4	52,250	1819	1,828,697	2,138,093	11	11
Alaska	3,000	4	590,884	....	63,592	64,356	..	..
Arizona	2,600	4	113,020	....	122,931	204,354	..	..
Arkansas	3,500	2	53,850	1836	1,311,564	1,574,449	8	9
California	6,000	4	158,360	1850	1,485,053	2,377,549	9	10
Colorado	5,000	2	103,925	1876	539,700	799,024	4	5
Connecticut	4,000	2	4,990	*1788	908,420	1,114,756	6	7
Delaware	2,000	4	2,050	*1787	184,735	202,322	3	3
District of Columbia	....	.	70	....	278,718	331,069	..	..
Florida	3,500	4	58,680	1845	528,542	752,619	4	5
Georgia	3,000	2	59,475	*1788	2,216,331	2,609,121	13	13
Hawaii	5,000	4	6,740	....	154,001	191,909	..	..
Idaho	3,000	2	84,800	1890	161,772	325,594	3	3
Illinois	12,000	4	56,650	1818	4,821,550	5,638,591	24	27
Indiana	5,000	4	36,350	1816	2,516,462	2,700,876	15	15
Iowa	5,000	2	56,025	1846	2,231,853	2,224,771	13	13
Kansas	3,000	2	82,080	1861	1,470,495	1,690,949	10	10
Kentucky	6,500	4	40,400	1792	2,147,174	2,289,905	13	13
Louisiana	5,000	4	48,720	1812	1,381,625	1,656,388	8	9
Maine	2,000	2	23,040	1820	694,466	742,371	6	6
Maryland	4,500	4	12,210	*1788	1,188,044	1,295,346	8	8
Massachusetts	8,000	1	8,315	*1788	2,805,346	3,366,416	15	16
Michigan	4,000	2	58,915	1837	2,420,982	2,810,173	14	14
Minnesota	5,000	2	83,365	1858	1,751,394	2,075,708	9	11
Mississippi	3,500	4	46,810	1817	1,551,270	1,797,114	9	10
Missouri	5,000	4	69,415	1821	3,106,665	3,293,335	17	18
Montana	5,000	4	146,080	1889	243,329	376,053	3	3
Nebraska	2,500	2	77,510	1867	1,066,300	1,192,214	8	8
Nevada	4,000	4	110,700	1864	42,335	81,875	3	3
N. Hampshire	2,000	2	9,305	*1788	411,588	430,572	4	4
New Jersey	10,000	3	7,815	*1787	1,883,669	2,537,167	10	12
New Mexico	2,600	4	122,580	....	195,310	327,301	..	..
New York	10,000	2	49,170	*1788	7,268,894	9,113,614	36	39
North Carolina	3,000	4	52,250	*1789	1,893,810	2,206,287	11	12
North Dakota	3,000	2	70,795	1889	319,146	577,056	3	4
Ohio	8,000	2	41,060	1803	4,157,545	4,767,121	23	23
†Oklahoma	4,500	4	70,430	1907	790,391	1,657,155	..	7
Oregon	1,500	4	96,030	1859	413,536	672,765	4	4
Pennsylvania	10,000	4	45,215	*1787	6,302,115	7,665,111	32	34
Porto Rico	8,000	4	3,600	....	953,243	1,118,012	..	..
Rhode Island	3,000	1	1,250	*1790	428,556	542,610	4	4
South Carolina	3,500	2	30,570	*1788	1,340,316	1,515,400	9	9
South Dakota	2,500	2	77,650	1889	401,570	583,888	4	4
Tennessee	4,000	2	42,050	1796	2,020,616	2,184,789	12	12
Texas	4,000	2	265,780	1845	3,048,710	3,896,542	15	18
Utah	2,000	4	84,970	1896	276,749	373,351	3	3
Vermont	1,500	2	9,565	1791	343,641	355,956	4	4
Virginia	5,000	4	42,450	*1788	1,854,184	2,061,612	12	12
Washington	4,000	4	69,180	1889	518,103	1,141,990	4	5
West Virginia	2,700	4	24,780	1863	958,800	1,221,119	6	7
Wisconsin	5,000	2	56,040	1848	2,069,042	2,333,860	12	13
Wyoming	2,500	4	97,890	1890	92,531	145,965	3	3
Total					78,271,811	93,346,543	447	483‡

*Dates of ratifying the Constitution by thirteen original states.

Area of new possessions not included in above list: Philippines, 140,000 square miles; Guam, 150; Tutuila and islets, 79. Population, Philippines, about 8,000,000; Guam, about 8,661; Tutuila, 5,800.

†Oklahoma and Indian Territory jointly admitted as State of Oklahoma in 1907.

‡April, 1911, the House of Representatives passed a bill providing for an increase of membership from 391 to 433 apportioned to the different states according to 1910 census—one for each 211,877. This will, if it becomes law, increase the electoral vote for 1912 to 525.

PRINCIPAL CITIES OF THE UNITED STATES

1910 Census

The following list names approximately all cities in the United States having ten thousand or more inhabitants. The numerals at extreme right of column are the 1910 census figures or recent official estimates of population.

Aberdeen, S. D.	10,753	Bluefield, W.Va.	11,188	Dallas, Tex....	92,104
Aberdeen, Wash.	13,660	Boise, Idaho....	17,358	Danbury, Conn.	20,234
Adams, Mass...	11,900	Boone, Ia.....	10,347	Danville, Ill....	27,871
Adrian, Mich...	10,763	Boston, Mass...	670,585	Danville, Va....	19,020
Akron, O.....	69,067	Braddock, Pa...	19,337	Davenport, Ia...	43,028
Almeda, Cal....	23,383	Bradford, Pa...	14,544	Dayton, O.....	116,577
Albany, N. Y...	100,253	Bridgeport, Conn.	102,054	Decatur, Ill....	31,140
Albuquerque, N.M.	11,020	Bridgeton, N. J.	14,209	Denison, Tex...	13,632
Alexandria, La.	11,213	Brockton, Mass..	56,878	Denver, Colo....	213,381
Alexandria, Va.	15,329	Brookline, Mass.	27,792	Des Moines, Ia..	86,368
Allentown, Pa..	51,913	Brownsville, Tex.	10,517	Detroit, Mich...	465,766
Alliance, O.....	15,083	Brunswick, Ga..	10,182	Dover, N. H....	13,247
Alpena, Mich...	12,706	Buffalo, N. Y...	423,715	Dubois, Pa.....	12,623
Alton, Ill.....	17,528	Burlington, Ia..	24,324	Dubuque, Ia....	38,494
Altoona, Pa....	52,127	Burlington, Vt.	20,468	Duluth, Minn...	78,466
Amsterdam, N.Y.	31,267	Butler, Pa.....	20,728	Dunkirk, N. Y..	17,221
Anaconda, Mont.	10,134	Butte, Mont....	39,165	Dunmore, Pa...	17,615
Anderson, Ind..	22,476	Cairo, Ill.....	14,548	Dusquesne, Pa..	15,727
Ann Arbor, Mich.	14,817	Calumet, Mich..	30,000	Durham, N. C...	18,241
Anniston, Ala..	12,794	Cambridge, Mass.	104,839	East Chicago, Ind.	19,098
Ansonia, Conn..	15,152	Cambridge, O...	11,327	East Liverpool,O.	20,387
Appleton, Wis..	16,773	Camden, N. J...	94,538	Easton, Pa.....	28,523
Argenta, Ark...	11,138	Canton, Ill.....	10,453	East Orange, N.J.	34,371
Asbury Park, N.J.	10,150	Canton, O.....	50,217	East Providence, R. I.	13,500
N. J.....	10,150	Carbondale, Pa..	17,040	East Saint Louis, Ill.....	58,547
Asheville, N. C.	18,762	Carlisle, Pa....	10,303	Eau Claire, Wis.	18,310
Ashland, Wis...	11,594	Carnegie, Pa...	10,009	Elgin, Ill.....	25,976
Ashtabula, O...	18,266	Cedar Rapids, Ia.	32,811	Elizabeth, N. J.	73,409
Atchison, Kan..	16,429	Central Falls,R.I.	22,754	Elkhart, Ind....	19,282
Athens, Ga.....	14,913	Chambersburg,Pa.	11,800	Elmira, N. Y...	37,176
Atlanta, Ga....	154,839	Champaign, Ill.	12,421	El Paso, Tex...	39,279
AtlanticCity,N.J.	46,150	Charleston, S. C.	58,833	Elwood, Ind....	11,028
Attleboro, Mass.	12,400	Charleston, W.Va.	22,996	Elyria, O.....	14,825
Auburn, Me.....	15,064	Charlotte, N. C.	34,014	Enid, Okla.....	13,799
Auburn, N. Y..	34,668	Chattanooga, Tenn.	44,604	Erie, Pa.....	66,525
Augusta, Ga....	41,040	Chelsea, Mass...	32,452	Escanaba, Mich.	13,194
Augusta, Me....	13,211	Chester, Pa.....	38,537	Eureka, Cal....	11,845
Aurora, Ill.....	29,807	Cheyenne, Wyo.	11,320	Evanston, Ill...	24,978
Austin, Tex....	29,860	Chicago, Ill.....2,185,283		Evansville, Ind.	69,647
Bakersfield, Cal.	12,727	Chicago Heights, Ill.	14,525	Everett, Mass..	33,484
Baltimore, Md..	558,485	Chickasha, Okla.	10,320	Everett, Wash..	24,814
Bangor, Me.....	24,803	Chicopee, Mass.	25,401	Fall River, Mass.	119,295
Barre, Vt.....	10,734	Chillicothe, O..	14,508	Fargo, N. D....	14,331
Batavia, N. Y..	11,613	Cicero, Ill.....	14,577	Findlay, O.....	14,858
Baton Rouge, La.	14,897	Cincinnati, O...	363,591	Fitchburg, Mass.	37,826
Battle Creek, Mich.	25,267	Cleburne, Tex...	10,364	Flint, Mich.....	38,550
Bay City, Mich.	45,166	Cleveland, O...	560,663	Fond du Lac,Wis.	18,797
Bayonne, N. J..	55,545	Clinton, Ia.....	25,577	Fort Dodge, Ia.	15,543
Beaumont, Tex.	20,640	Clinton, Mass...	13,000	Fort Scott, Kan.	10,463
Beaver Falls, Pa.	12,191	Coatesville, Pa.	11,084	Fort Smith, Ark.	23,975
Bellaire, O.....	12,946	Coffeyville, Kan.	12,687	Fort Wayne, Ind.	63,933
Belleville, Ill...	21,122	Cohoes, N. Y...	24,709	Fort Worth,Tex.	73,312
Bellingham, Wash.	24,298	Colorado Springs, Colo.	29,078	Frankfort, Ky..	10,465
Beloit, Wis.....	15,125	Columbia, Pa...	11,454	Frederick, Md..	10,411
Berkeley, Cal..	40,434	Columbia, S. C.	26,319	Freeport, Ill....	17,567
Berlin, N. H...	11,780	Columbus, Ga..	20,554	Fresno, Cal.....	24,892
Bessemer, Ala..	10,864	Columbus, O....	181,511	Fulton, N. Y....	10,480
Bethlehem, Pa.	12,837	Concord, N. H..	21,497	Gadsden, Ala...	10,557
Beverly, Mass..	18,650	Connellsville, Pa.	12,845	Galesburg, Ill..	22,089
Biddeford, Me..	17,079	Corning, N. Y..	13,730	Galveston, Tex..	36,981
Billings, Mont..	10,031	Cortland, N. Y.	11,504	Gardner, Mass..	13,910
Binghamton,N.Y.	48,443	Council Bluffs, Ia.	29,292	Garfield, N. J...	10,213
Birmingham, Ala.	132,685	Covington, Ky..	53,270	Gary, Ind.....	16,802
Bisbee, Ariz....	10,000	Cranston, R. I..	21,171	Geneva, N. Y...	12,446
Bloomfield, N. J.	15,070	Cumberland, Md.	21,839		
Bloomington, Ill.	25,768				

Glen Falls, N. Y.	15,243
Globe, Ariz.	12,000
Gloucester, Mass.	24,398
Gloversville, N.Y.	20,642
Grand Forks, N.D.	12,478
Grand Island, Neb.	10,326
Grand Rapids, Mich.	112,571
Great Falls, Mont.	13,948
Greenbay, Wis.	25,236
Greensboro, N. C.	15,895
Greensburg, Pa.	13,012
Greenville, S. C.	15,741
Guthrie, Okla.	12,000
Hackensack, N.J.	14,050
Hagerstown, Md.	16,507
Hamilton, O.	35,279
Hammond, Ind.	20,925
Hannibal, Mo.	18,341
Harrisburg, Pa.	64,186
Harrison, N. J.	14,498
Hartford, Conn.	98,915
Hattiesburg, Miss.	11,733
Haverhill, Mass.	44,115
Hazelton, Pa.	25,452
Helena, Mont.	12,515
Henderson, Ky.	11,452
Hoboken, N. J.	70,324
Holland, Mich.	10,490
Holyoke, Mass.	57,730
Homestead, Pa.	18,713
Hornell, N. Y.	13,617
Hot Springs, Ark.	14,434
Houston, Tex.	78,800
Hudson, N. Y.	11,417
Huntingdon, Ind.	10,271
Huntington, W. Va.	31,161
Hutchinson, Kan.	16,364
Hyde Park, Mass.	14,507
Independence, Kan.	10,480
Indianapolis, Ind.	233,650
Iowa City, Ia.	10,091
Ironton, O.	13,147
Ironwood, Mich.	12,821
Irvington, N. J.	11,877
Ishpeming, Mich.	12,448
Ithaca, N. Y.	14,802
Jackson, Mich.	31,433
Jackson, Miss.	21,262
Jackson, Tenn.	15,779
Jacksonville, Fla.	57,699
Jacksonville, Ill.	15,326
Jamestown, N.Y.	31,297
Janesville, Wis.	13,894
Jefferson City, Mo.	11,850
Jeffersonville, Ind.	10,412
Jersey City, N. J.	267,779
Johnstown, N.Y.	10,447
Johnstown, Pa.	55,482
Joliet, Ill.	34,670
Joplin, Mo.	32,073
Kalamazoo, Mich.	39,437
Kankakee, Ill.	13,986
Kansas City, Kan.	82,331
Kansas City, Mo.	248,381
Kearney, N. J.	18,659
Keene, N. H.	10,068
Kenosha, Wis.	21,371
Keokuk, Ia.	14,008
Key West, Fla.	19,945
Kingston, N. Y.	25,908
Knoxville, Tenn.	36,346
Kokomo, Ind.	17,010
Lackawanna, N.Y.	14,540
Laconia, N. H.	10,183
La Crosse, Wis.	30,417
Lafayette, Ind.	20,081
Lake Charles, La.	11,449
Lakewood, O.	15,181
Lancaster, O.	13,093
Lancaster, Pa.	47,277
Lansing, Mich.	31,229
La Porte, Ind.	10,525
Laredo, Tex.	14,855
La Salle, Ill.	11,537
Lawrence, Kan.	12,374
Lawrence, Mass.	85,892
Leavenworth, Kan.	19,363
Lebanon, Pa.	19,240
Leominster, Mass.	14,910
Lewiston, Me.	26,247
Lexington, Ky.	35,099
Lima, O.	30,508
Lincoln, Ill.	10,892
Lincoln, Neb.	43,973
Little Falls, N. Y.	12,273
Little Rock, Ark.	45,941
Lockport, N. Y.	17,970
Logansport, Ind.	19,050
Longbeach, Cal.	17,809
Long Branch, N.J.	13,298
Lorain, O.	28,883
Los Angeles, Cal.	319,198
Louisville, Ky.	223,928
Lowell, Mass.	106,294
Lynchburg, Va.	29,494
Lynn, Mass.	89,336
McAlester, Okla.	12,954
McKeesport, Pa.	42,694
McKees Rocks, Pa.	14,702
Macon, Ga.	40,665
Madison, Wis.	25,531
Mahanoy City, Pa.	15,936
Malden, Mass.	44,404
Manchester, N.H.	70,063
Manchester, Va.	12,200
Manistee, Mich.	12,381
Manitowoc, Wis.	13,027
Mankato, Minn.	10,365
Mansfield, O.	20,768
Marietta, O.	12,923
Marinette, Wis.	14,610
Marion, Ind.	19,359
Marion, O.	18,232
Marlboro, Mass.	14,579
Marquette, Mich.	11,503
Marshall, Tex.	11,452
Marshalltown, Ia.	13,374
Martinsburg, W. Va.	10,698
Mason City, Ia.	11,230
Massillon, O.	13,879
Mattoon, Ill.	11,456
Meadville, Pa.	12,780
Medford, Mass.	23,159
Melrose, Mass.	15,715
Memphis, Tenn.	131,105
Menominee, Mich.	10,507
Meriden, Conn.	27,265
Meridian, Miss.	23,285
Michigan City, Ind.	19,027
Middletown, Conn.	11,851
Middletown, N. Y.	15,313
Middletown, O.	13,152
Milford, Mass.	12,910
Millville, N. J.	12,451
Milwaukee, Wis.	373,857
Minneapolis, Minn.	301,408
Mishawaka, Ind.	11,886
Missoula, Mont.	12,869
Moberly, Mo.	10,923
Mobile, Ala.	51,521
Moline, Ill.	24,199
Monessen, Pa.	11,775
Monroe, La.	10,209
Montclair, N. J.	21,550
Montgomery, Ala.	38,136
Morristown, N.J.	12,507
Mt. Carmel, Pa.	17,532
Mt. Vernon, N. Y.	30,919
Muncie, Ind.	24,005
Muscatine, Ia.	16,178
Muskegon, Mich.	24,062
Muskogee, Okla.	25,278
Nanticoke, Pa.	18,877
Napa, Cal.	15,791
Nashua, N. H.	26,005
Nashville, Tenn.	110,364
Natchez, Miss.	11,791
Naugatuck, Conn.	12,722
New Albany, Ind.	20,629
Newark, N. J.	347,469
Newark, O.	25,404
New Bedford, Mass.	96,652
New Britain, Conn.	43,916
New Brunswick, N. J.	23,388
Newburgh, N. Y.	27,805
Newburyport, Mass.	14,949
New Castle, Pa.	36,280
New Haven, Conn.	133,605
New London, Conn.	19,659
New Orleans, La.	339,075
Newport, Ky.	30,309
Newport, R. I.	27,149
Newport News, Va.	20,205
New Rochelle, N. Y.	28,867
Newton, Mass.	39,806
New York, N. Y.	4,776,883
Niagara Falls, N. Y.	30,445
Norfolk, Va.	67,452
Norristown, Pa.	27,875
North Adams, Mass.	22,019
Northampton, Mass.	19,431
North Braddock Pa.	11,824
North Tonawanda, N. Y.	11,955
North Yakimo, Wash.	14,082

Norwich, Conn...	20,367	Riverside, Cal...	15,212	Temple, Tex....	10,993
Norwood, O.....	16,185	Roanoke, Va....	34,874	Terre Haute,Ind.	58,157
Oakland, Cal...	150,174	Rochester, N. Y.	218,149	Tiffin, Ohio.....	11,894
Oak Park, Ill .	19,444	Rockford, Ill....	45,401	Toledo, Ohio....	168,497
Ogden, Utah....	25,580	Rock Island, Ill.	24,335	Topeka, Kan....	43,684
Ogdensburg, N.Y.	15,933	Rome, Ga.....	12,099	Torrington, Conn.	15,483
Oil City, Pa....	15,657	Rome, N. Y.....	20,497	Traverse City, Mich.	12,115
Oklahoma, Okla.	64,205	Rutland, Vt.....	13,546	Trenton, N. J...	96,815
Oldforge, Pa....	11,324			Trinidad, Colo..	10,204
Olean, N. Y....	14,743	Sacramento, Cal.	44,696	Troy, N. Y.....	76,813
Omaha, Neb....	124,096	Saginaw, Mich..	50,510	Tucson, Ariz....	13,193
Orange, N. J....	29,630	St. Cloud, Minn.	10,600	Tulsa, Okla.....	18,182
Oshkosh, Wis...	33,062	St. Joseph, Mo..	77,403	Tyler, Tex.....	10,400
Ossining, N. Y..	11,480	St. Louis, Mo...	687,029		
Oswego, N. Y...	23,368	St. Paul, Minn..	214,744		
Ottumwa, Iowa..	22,012	Salem, Mass....	43,697	Union, N. J.....	21,023
Owensboro, Ky..	16,011	Salem, Ore.....	14,094	Uniontown, Pa..	13,344
		Salt Lake City, Utah	92,777	Utica, N. Y.....	74,419
Paducah, Ky....	22,760	San Angelo, Tex.	10,321	Vallejo, Cal.....	11,340
Palestine, Tex..	10,482	San Antonio,Tex.	96,614	Vicksburg, Miss.	20,814
Paris, Tex.....	11,269	San Bernardino, Cal.	12,779	Vincennes, Ind..	14,895
Parkersburg, W. Va.....	17,842	San Diego, Cal..	39,578	Virginia, Minn..	10,473
Parsons, Kan....	12,463	Sandusky, Ohio..	19,989		
Pasadena, Cal...	30,291	San Francisco, Cal.	416,912	Waco, Tex.....	26,425
Passaic, N. J...	54,773	San Jose, Cal...	28,946	Wakefield, Mass.	11,310
Paterson, N. J..	125,600	Santa Barbara, Cal.	11,659	Walla Walla, Wash.	19,364
Pawtucket, R. I.	51,622	Santa Cruz, Cal.	11,464	Waltham, Mass.	27,834
Peabody, Mass..	14,910	Saratoga Springs, N. Y.....	12,693	Warren, Ohio...	11,081
Peekskill, N. Y.	15,245	Sault Ste. Marie, Mich.	12,615	Warren, Pa.....	11,080
Pensacola, Fla...	22,982	Savannah, Ga...	65,064	Washington,D.C.	331,069
Peoria, Ill.....	66,950	Schenectady, N. Y.....	72,826	Washington, Pa.	18,778
Perth Amboy, N. J.	32,121	Scranton, Pa....	129,867	Waterbury, Conn.	73,141
Peru, Ind.....	10,910	Seattle, Wash...	237,194	Waterloo, Iowa..	26,693
Petersburg, Va..	24,127	Sedalia, Mo.....	17,822		
Philadelphia, Pa.	1,549,008	Selma, Ala.....	13,649	Watertown, Mass.	12,800
Phillipsburg, N.J.	13,903	Shamokin, Pa...	19,588	Watertown, N.Y.	26,730
Phoenix, Ariz...	11,134	Sharon, Pa.....	15,270	Waterville, Me..	11,458
Phoenixville, Pa.	10,743	Shawnee, Okla..	12,474	Watervliet, N.Y.	15,074
Pinebluff, Ark...	15,102	Sheboygan, Wis.	26,398	Waukegan, Ill..	16,069
Piqua, Ohio.....	13,388	Shenandoah, Pa.	25,774	Wausau, Wis...	16,560
Pittsburg, Kan..	14,755	Sherman, Tex...	12,412	Waycross, Ga...	14,485
Pittsburg, Pa...	533,905	Shreveport, La..	28,015	Webb City, Mo..	11,817
Pittsfield, Mass.	32,121	Sioux City, Iowa.	47,828	Webster, Mass..	10,210
Pittston, Pa....	16,267	Sioux Falls, S.D.	14,094	Weehawken, N.J.	11,228
Plainfield, N. J..	20,550	Somerville, Mass.	77,236	West Chester, Pa	11,767
Plattsburg, N. Y.	11,138	South Bend, Ind.	53,684	Westfield, Mass.	15,000
Plymouth, Mass.	11,200	South Bethlehem, Pa.	19,973	West Hoboken, N. J.	35,403
Plymouth, Pa...	16,996	Southbridge, Mass.	10,210	West New York, N. J.	13,560
Pomona, Cal....	10,207	South Omaha,Neb.	26,259	West Orange, N. J.....	10,980
Pontiac, Mich...	14,532	South Sharon,Pa.	10,190	Wheeling, W.Va.	41,641
Port Chester,N.Y.	12,809	Spartanburg, S.C.	17,517	White Plains, N. Y.	15,949
Port Huron, Mich.	18,863	Spokane, Wash..	104,402	Wichita, Kan...	52,450
Portland, Me...	58,571	Springfield, Ill..	51,678	Wilkes Barre, Pa.	67,105
Portland, Ore...	207,214	Springfield,Mass.	88,926	Wilkinsburg, Pa.	18,924
Portsmouth, N.H.	11,269	Springfield, Mo..	35,201	Williamsport,Pa.	31,860
Portsmouth, O..	23,481	Springfield, O...	46,921	Willimantic, Conn.	11,230
Portsmouth, Va.	33,190	Stamford, Conn.	25,138	Wilmington, Del.	87,411
Pottstown, Pa...	15,599	Staunton, Va....	10,604	Wilmington,N.C.	25,748
Pottsville, Pa...	20,236	Steelton, Pa.....	14,246	Winona, Minn...	18,583
Poughkeepsie, N. Y.....	27,936	Steubenville, O..	22,391	Winston Salem, N. C.....	22,700
Providence, R. I.	224,326	Stillwater, Minn.	10,198	Winthrop, Mass.	10,132
Pueblo, Colo....	44,395	Stockton, Cal...	23,253	Woburn, Mass..	15,380
		Streator, Ill.....	14,253	Woonsocket, R.I.	38,125
Quincy, Ill.....	36,587	Sunbury, Pa....	13,770	Worcester, Mass.	145,986
Quincy, Mass...	32,642	Superior, Wis...	40,384		
		Syracuse, N. Y..	137,249	Yonkers, N. Y..	79,803
Racine, Wis.....	38,002			York, Pa.....	44,750
Raleigh, N. C..	19,218	Tacoma, Wash..	83,743	Youngstown, O..	79,066
Reading, Pa....	96,071	Tampa, Fla.....	37,782		
Redlands, Cal...	10,449	Taunton, Mass..	34,259	Zanesville, O....	28,026
Reno, Nev.....	10,867				
Rensselaer, N.Y.	10,711				
Revere, Mass....	18,219				
Richmond, Ind..	22,324				
Richmond, Va...	127,628				

PRESIDENTS OF THE UNITED STATES

	Name.	Birthplace.	Year.	Paternal Ancestry.	Residence.	Inaugurated. Year.	Inaugurated. Age.	Politics.	Place of Death.	Year.	Age.
1	George Washington.....	Westmoreland Co., Va....	1732	English	Va....	1789	57	Fed.....	Mt. Vernon, Va.....	1799	67
2	John Adams.....	Quincy, Mass.....	1735	English	Mass..	1797	62	Fed.....	Quincy, Mass.....	1826	90
3	Thomas Jefferson	Shadwell, Vt.....	1743	Welsh	Va....	1801	58	Rep.* ..	Monticello, Va	1826	83
4	James Madison	Fort Conway, Va.....	1751	English	Va....	1809	58	Rep	Montpelier, Va.....	1836	85
5	James Monroe	Westmoreland Co., Va....	1758	Scotch.....	Va....	1817	59	Rep. ...	New York City.....	1831	73
6	John Quincy Adams....	Quincy, Mass	1767	English	Mass..	1825	58	Rep *...	Washington, D. C.....	1848	80
7	Andrew Jackson.....	Union Co., N. C.*	1767	Scotch-Irish .	Tenn..	1829	62	Dem ...	Hermitage, Tenn.....	1845	78
8	Martin Van Buren.....	Kinderhook, N. Y.....	1767	Dutch	N. Y..	1837	55	Dem ...	Lindenwold, N. Y.....	1862	79
9	William H. Harrison....	Berkeley, Va	1773	English	O.....	1841	68	Whig...	Washington, D. C.....	1841	68
10	John Tyler	Greenway, Va.....	1790	English	Va....	1841	51	Dem.. .	Richmond, Va.....	1862	72
11	James K. Polk.....	Mecklenburg Co., N. C....	1795	Scotch-Irish	Tenn..	1845	50	Dem ...	Nashville, Tenn.....	1849	53
12	Zachary Taylor	Orange Co., Va.....	1784	English	La	1849	65	Whig, ..	Washington, D. C.....	1850	65
13	Millard Fillmore	Summerkill, N. Y.....	1800	English	N. Y .	1850	50	Whig. ..	Buffalo, N. Y.....	8174	74
14	Franklin Pierce	Hillsboro, N. H.....	1804	English	N. H..	1853	49	Dem ...	Concord, N. H.....	1869	64
15	James Buchanan.....	Cove Gap, Pa.....	1791	Scotch-Irish .	Pa	1857	66	Dem ...	Wheatland, Pa.....	1868	77
16	Abraham Lincoln	Larue Co., Ky.....	1809	English	Ill....	1861	52	Rep	Washington, D. C.....	1865	56
17	Andrew Johnson	Raleigh, N. C.....	1808	English	Tenn..	1865	57	Rep.....	Carter's Depot, Tenn.....	1875	66
18	Ulysses S. Grant.....	Point Pleasant, O.....	1822	Scotch.....	D. C..	1869	47	Rep	Mt. McGregor, N. Y.....	1885	63
19	Rutherford B. Hayes...	Delaware, O.....	1822	Scotch.....	O.....	1877	54	Rep	Fremont, O.....	1893	70
20	James A. Garfield.....	Cuyahoga Co., O.....	1831	English	O.....	1881	49	Rep. ...	Long Branch, N. J.....	1881	49
21	Chester A. Arthur.....	Fairfield, Vt.....	1830	Scotch-Irish .	N. Y..	1881	51	Rep	New York City	1886	56
22	Grover Cleveland..	Caldwell, N. J.....	1837	English	N. Y..	1885	48	Dem ...	.....	....	..
23	Benjamin Harrison.....	North Bend, O.....	1833	English	Ind ..	1889	55	Rep	Indianapolis, Ind.....	1901	67
24	Grover Cleveland.....	Caldwell, N. J	1837	English	N. Y..	1893	56	Dem ...	.....	....	..
25	William McKinley.....	Niles, O	1843	Scotch-Irish .	O.....	1897	54	Rep	Buffalo, N. Y.....	1901	58
26	Theodore Roosevelt	New York City	1858	Dutch	N. Y..	1901	43	Rep	.....	....	..

* Jackson called himself a South Carolinian and his biographer, Kendall, recorded his birthplace in Lancaster County, S. C., but Parton has published documentary evidence to show that Jackson was born in Union County, N. C., less than a quarter-mile from the South Carolina line. * The Democratic party of to-day claims lineal descent from the first Republican party and President Jefferson as its founder. * Political parties were disorganized at the time of the election of John Quincy Adams. He claimed to be a Republican, but his doctrines were decidedly Federalistic. The opposition to his Admin. istration took the name of Democrats and elected Jackson President.

RELIGIOUS VIEWS AND CHURCH CONNECTIONS OF OUR PRESIDENTS

George Washington was a member of the Episcopal Church, and a great believer in prayer, as is evidenced by numerous messages. One was: "The blessing and protection of Heaven are at all times necessary, but especially so in time of public danger and distress." He also said: "Though I am a member of the Church of England, I have no exclusive partialities."

John Adams was a Congregationalist, and came of a long line of Puritan ancestors, but was very liberal in his views as to religion. He was baptized October 26, 1735, in the first church of Quincy, called "The Church of Statesmen."

Thomas Jefferson's ideas on religion are difficult to classify. He was an admirer of the great Tom Paine, the agnostic, and was denounced from New England pulpits as a "Godless man," but a letter to Mrs. John Adams shows that he believed in a future life, where "we will meet our friends," and his life was a strictly moral one. He belonged to no church.

John Quincy Adams was a Congregationalist, like his father, and wrote a hymn.

Madison and Monroe were both Episcopalians in good standing.

Andrew Jackson was notoriously irreligious in his early manhood and mature life. As a youth at Salisbury, he is described as "the most roaring, rollicking, game-cocking, horse-racing, card-playing, mischievous fellow that ever lived in the town." After his retirement from the Presidency he became converted and joined the Presbyterian Church, his dying words being: "My dear children and friends and servants, I hope and trust to meet you all in heaven, both white and black."

Martin Van Buren never made any religious profession, but was a man of irreproachable morality.

William Henry Harrison was an Episcopalian of strong convictions, which prevented him from fighting duels.

John Tyler was also an Episcopalian.

James K. Polk made no profession until he was on his deathbed, when a Methodist clergyman sprinkled him.

Zachary Taylor apparently gave the matter of religion no thought, but his wife was an Episcopalian, and he contributed to the support of that church.

Millard Fillmore was a very quiet and pious man, who affiliated with the Baptists.

Franklin Pierce was an Episcopal communicant.

James Buchanan was always pious, but didn't join the church until after his retirement from the Presidency, when he became a Presbyterian.

Abraham Lincoln was profoundly reverential, and though uncommitted to any special creed, he was essentially a devout believer. Both his parents were Baptists.

Andrew Johnson was not a member of any church, but a tacit believer in Christianity. He inclined to Methodism.

Ulysses Grant was a Methodist, and extolled for his piety by his biographers, though he was never demonstrative.

Rutherford B. Hayes was a Methodist.

James A. Garfield was a member of the Church of Christ.

Chester A. Arthur was an Episcopalian.

Benjamin Harrison was a Presbyterian, and active in church affairs.

Grover Cleveland is a Presbyterian.

William McKinley was a Methodist.

Theodore Roosevelt is a member of the Reformed Dutch Church, and sometimes preaches from its pulpit.

THE PRESIDENTIAL SUCCESSION

The Presidential succession is fixed by chapter 4 of the acts of the Forty-ninth Congress, first session. In case of the removal, death, resignation, or inability of both the President and Vice-President, then the Secretary of State shall act as President until the disability of the President or Vice-President is removed or a President is elected. If there be no Secretary of State, then the Secretary of the Treasury will act; and the remainder of the order of succession is as follows: The Secretary of War, Attorney-General, Postmaster-General, Secretary of the Navy, and Secretary of the Interior. The acting President must, upon taking office, convene Congress, if not at the time in session, in extraordinary session, giving twenty days' notice. This act applies only to such Cabinet officers as shall have been appointed by the advice and consent of the Senate, and are eligible under the Constitution to the Presidency.

How the Presidents Are Elected

Even the ablest politicians of the country have little more than a superficial knowledge of how Presidents are elected under the electoral system now in use. This feature of the Constitution gave its framers more trouble than any other section.

Properly speaking, there is no popular vote for President. There is only a vote for presidential electors. The President is elected by the States. Each State is given two votes to represent its sovereignty and as many other votes as it may be entitled to representatives: that is, the votes are distributed in proportion to its population. The State casts the vote; the people do not.

On Presidential election day, which occurs every four years on the Tuesday next after the first Monday in November, instead of voting directly for the President and Vice-President of the United States, the qualified voters of each State vote for as many electors as their State has Senators and Representatives in Congress. The names of the electors to be voted for are placed upon the various national tickets, and those elected constitute the Electoral College. After the election those elected meet in their respective States on the second Monday of January following, at the State capital, and ballot for President and Vice-President.

Separate lists are prepared, one copy of which is deposited in the mail and another sent by special messenger to the President of the Senate. The Senate then visits the House of Representatives, the President of the Senate occupying a seat with the Speaker of the House. The President of the Senate announces tellers on the part of the Senate, the Speaker of the House performing a like duty for that body.

The President of the Senate then breaks the seals of the package containing the lists and announces the votes, a note of which is made by the secretary. When this is concluded the result declares the next President and Vice-President.

UNITED STATES ARMY RECRUITING REQUIREMENTS

Applicants for first enlistment must be between the ages of twenty-one and thirty-five years, of good character and temperate habits, able-bodied, free from disease, and must be able to speak, read and write the English language. Minors will not be enlisted.

For infantry and coast artillery the height must be not less than five feet four inches, and weight not less than one hundred and twenty (120) pounds and not more than one hundred and ninety (190) pounds.

For cavalry and field artillery the height must be not less than five feet four inches and not more than five feet ten inches, and weight not to exceed one hundred and sixty-five (165) pounds. No minimum weight is prescribed for these arms, but the chest measures must be satisfactory.

UNITED STATES NAVY PAY TABLE

Rank.	Sea.*	On Shore Duty.	On Leave or Waiting Orders.
Admiral	$13,500	$13,5 0	....
Rear-Admirals, first nine	7,500	6,375	....
Rear-Admirals, second nine	5,500	4,675	....
Brigadier-General, Commandant Marine Corps	.....	5,500	....
Captains	3,500	2,975	....
Commanders	3,000	2,550	....
Lieutenant-Commanders	2,500	2,125	....
Lieutenants	1,800	1,530	....
Lieutenants (Junior Grade)	1,500	1,275	....
Ensigns	1,400	1,190	....
Chief Boatswains, Chief Gunners, Chief Carpenters, Chief Sailmakers	1,400	1,400	....
Naval Cadets	500	500	$ 500
Mates	900	700	500
Medical and Pay Directors and Inspectors having the same rank at sea*	4,400	....	....
Fleet-Surgeons and Fleet-Paymasters	4,400	....	....
Surgeons and Paymasters	2,800 to 4,200	2,500 to 3,000	2,400 to 4,000
Chaplains	2,500 to 2,800	1,600 to 1,900	2,000 to 2,300
Professors and Civil Engineers	2,400 to 3,500	1,500 to 2,600	2,400 to 3,500
Naval Constructors	.....	2,200 to 3,200	3,200 to 4,200

* Or shore duty beyond sea.

Warrant officers (boatswains, gunners, carpenters, sailmakers, pharmacists, and warrant machinists) are paid from $1,200 to $1,800 a year.

Commandants' clerks and paymasters' clerks receive from $1,000 to $1,800 a year.

Petty officers (masters-at-arms, boatswains' mates, gunners' mates, gun captains, quartermasters, machinists, hospital stewards, yeomen, bandmasters, first musicians, coxswains, electricians, boiler-makers, coppersmiths, blacksmiths, plumbers and fitters, sailmakers' mates, carpenters' mates, oilers, printers, painters, water tenders, and hospital apprentices, first class) receive from $360 to $840 a year.

The pay of first-class seamen per month is $24; seamen gunners, $26; firemen, first class, $35; musicians, first class, $32; apprentices, first class, $21.

The pay of second-class seamen per month is: Ordinary seamen, $19; firemen, second class, $30; shipwrights, $25; musicians, second class, $30; apprentices, second class, $15.

The pay of third-class seamen per month is: Landsmen, $16; coal passers, $22; apprentices, third class, $9.

UNITED STATES NAVAL ENLISTMENT

The term of enlistment of all enlisted men of the navy is four years. Minors over the age of eighteen may be enlisted without consent of parents or guardians, but minors under, but claiming to be over eighteen years of age, are liable, if enlisted, to punishment for fraudulent enlistment. Only such persons shall be enlisted as can reasonably be expected to remain in the service. Every person, before being enlisted, must pass the physical examination prescribed in the medical instructions. Applicants for enlistment must be American citizens, able to read and write English, and when enlisted must take the oath of allegiance.

ILLITERACY IN THE UNITED STATES

(Census of 1900)

General Nativity and Color.	Aggregate.	Can Read but Cannot Write.		Can Neither Read nor Write.	
		Number	Per C't.	Number	Per C't
Aggregate	6,180,069	955,843	15.5	5,224,226	84.5
White (total)	3,200,746	645,959	20.2	2,554,787	79.8
Native white	1,913,611	445,263	23.3	1,468,348	76.7
Native parents	1,734,764	410,013	23.6	1,324,751	76.4
Foreign parents	178,847	35,250	19.7	143,597	80.3
Foreign white	1,287,135	200,696	15.6	1,086,439	84.4
Colored (total)	2,979,323	309,884	10.4	2,669,439	89.6
Persons of negro descent	2,853,194	306,303	10.7	2,546,891	89.3
Chinese	25,396	1,024	4.0	24,372	96 0
Japanese	4,386	137	3.1	4,249	96.9
Indian	96,347	2,420	2.5	93,927	97.5

These returns do not apply to the illiteracy of persons of less than ten years of age.

SALARIES OF UNITED STATES OFFICERS

Civil, Military and Naval

Salaries of the principal United States government officials are as follows: President, $50,000; vice-president, $8,000; cabinet officers, $8,000 each; senators, $5,000 each, with mileage; speaker of the house, $8,000; representatives, $5,000 each, with mileage; chief justice of the Supreme Court, $10,500; associate justices, $10,000 each; justices of Circuit courts, $6,000 each.

Army Pay Table

Grade.	Pay of Officers in Active Service. Yearly Pay.				
	First 5 years' Service.	After 5 years' Service.	After 10 years' Service.	After 15 years' Service.	After 20 years' Service.
		10 *p. c.*	20 *p. c.*	30 *p. c.*	40 *p. c.*
Lieutenant-General	$11,000	....	....	....	....
Major-General	7,500	....	....	....	....
Brigadier-General	5,500	....	....	....	....
Colonel	3,500	$3,850	$4,200	$4,500	$ 4,500
Lieutenant-Colonel	3,000	3,300	3,600	3,900	4,000
Major	2,500	2,750	3,000	3,250	3,500
Captain, mounted	2,000	2,200	2,400	2,600	2,800
Captain, not mounted	1,800	1,980	2,160	2,340	2,520
1st Lieutenant, mounted	1,600	1,760	1,920	2,080	2,240
1st Lieut., not mounted	1,500	1,650	1,800	1,950	2,100
2d Lieutenant, mounted	1,500	1,650	1,800	1,950	2,100
2d Lieutenant, not mounted	1,400	1,540	1,680	1,820	1,960

Grades.	Pay of Retired Officers. Yearly Pay.				
	First 5 years' Service.	After 5 years' Service.	After 10 years' Service.	After 15 years' Service.	After 20 years' Service.
Lieutenant-General	$8,250	....	....	....	....
Major-General	5,625	....	....	....	....
Brigadier-General	4,125	....	....	....	....
Colonel	2,625	$2,887	$3,150	$3,375	$3,375
Lieutenant-Colonel	2,250	2,475	2,700	2,925	3,000
Major	1,875	2,062	2,250	2,437	2,625
Captain, mounted	1,500	1,650	1,800	1,950	2,100
Captain, not mounted	1,350	1,485	1,620	1,755	1,890
1st Lieutenant, mounted	1,200	1,320	1,440	1,560	1,680
1st Lieutenant, not mounted	1,125	1,237	1,350	1,462	1,575
Lieutenant, mounted	1,125	1,237	1,350	1,462	1,575
2d Lieutenant, not mounted	1,050	1,115	1,260	1,365	1,470

Chaplains have the rank, pay, and allowances of captains of infantry.

The pay of non-commissioned officers is from $18 to $45 per month and of privates $13 per month. Services in Porto Rico, Cuba, Philippines, Hawaii, and Alaska, 10 per cent additional for officers and 20 per cent for enlisted men.

BUSINESS FAILURES IN THE UNITED STATES
1857 TO 1902

YEAR	Failures	Amount of Liabilities	YEAR	Failures	Amount of Liabilities
1857	4,932	$291,750,000	1880	4,735	$ 65,752,000
1858	4,225	95,749,000	1881	5,582	81,155,932
1859	3,913	64,394,000	1882	6,738	101,547,564
1860	3,676	79,807,000	1883	9,184	172,874,172
1861	6,993	207,210,000	1884	10,968	226,343,427
1862	1,652	23,049,000	1885	10,637	124,220,321
1863	495	7,899 900	1886	9,834	114,644,119
1864	520	8,579,000	1887	9,634	167,560,944
1865	530	17,625,000	1888	10,679	123,829,973
1866	1,505	53,783,000	1889	10,882	148,784,337
1867	2,780	96,666,000	1890	10,907	189,856,964
1868	2,608	63,691,000	1891	12,273	189,868,638
1869	2,799	75,054,054	1892	10,344	114,044,167
1870	3,546	88,242,000	1893	15,242	346,779,889
1871	2,915	85,252,000	1894	13,885	172,992,856
1872	4,069	121,056,000	1895	13,197	173,196,060
1873	5,183	228,499,900	1896	15,088	226,096,834
1874	5,830	155,239,000	1897	13,351	154,332,071
1875	7,740	201,000,000	1898	12,186	130,662,899
1876	9,092	191,177,000	1899	9,337	90,879,889
1877	8,872	190,669,936	1900	10,774	138,495,673
1878	10,478	234,383,132	1901	11,002	113,092,376
1879	6,658	98,149,053	1902	11,615	117,476,769

IMMIGRATION INTO THE UNITED STATES, 1820-1903

YEAR.	Total Alien Passengers.	YEAR.	Total Alien Passengers.	YEAR.	Total Immig'ants.	YEAR.	Total Immig'ants.
1820	8,385	1842	104,565	1864	193,195	1885	395,346
1821	9,127	1843	52,496	1865.—	247,453	1886	334,203
1822	6,911	1844	78,615	1866	163,594	1887	490,109
1823	6,354	1845	114,371	Fisc[yr end'g Je 30		1888	546,889
1824	7,912	1684	154,416	1867	298,967	1889	444,427
1825	10,199	1847	234,968	1868	282,189	1890	455,302
1826	10,837	1848	226,527	1869	352,569	1891	560,319
1827	18,875	1849	297,024	1870	387,203	1892	623,084
1828	27,382	1850	369,986	1871	321,350	1893	502,917
1829	22,520	1851	379,466	1872	404,806	1894	314,467
1830	23,322	1852	371,603	1873	459,803	1895	279,948
1831	22,633	1853	368,645	1874	313,339	1896	343,267
1832	60,482	1854	427,833	1875	227,498	1897	230,832
1833	58,640	1855	200,877	1876	169,986	1898	229,299
1834	65,365	1856	195,857	1877	141,857	1899	311,715
1835	45,374	1857	246,945	1878	138,469	1900	448,572
1836	76,242	1858	119,501	1879	177,826	1901	487,918
1837	79,340	1859	118,616	1880	457,257	1902	648,743
1838	38,914	1860	150,237	1881	669,431	1903	857,046
1839	68,069	1861	89,724	1882	788,992		
1840	84,066	1862	89,207	1883	603,322	Total	21,758,862
1841	80,289	1863	174,524	1884	518,592	1789 to18(est)	250,000

RELIGIOUS DENOMINATIONS IN THE UNITED STATES

Denomination.	Members.	Denomination.	Members.
Adventists	98,487	Friends	118,306
Baptists	4,629,487	Jews	143,000
Brethren (River)	3,605	Mormons	310,500
Brethren (Plymouth)	6,661	Lutherans	1,745,588
Catholics	9,531,303	Menonites	59,274
Catholic Apostolic	1,491	Methodists	6,084,755
Christian Science	51,608	Presbyterians	1,635,016
Communists	3,084	Protestant Episcopal	767 334
Congregationalists	659,324	Reformed	385,038
Disciples of Christ	1,207,377	United Brethren	277.352
Dunkards	106,194	Unitarians	71,000
Evangelicals	162,031	Universalists	52,944

CREEDS IN THE WORLD

The following estimates, by Krose, are the latest that have been made by a competent authority, and refer to the religions of the world at the commencement of the twentieth century:—

Creeds.	No. of Followers.	Creeds.	No. of Followers.
Christianity	549,000,000	Taoism	32,000,000
Worship of Ancestors and Confucianism	253,000,000	Shintoism	17,000,000
Hindooism	210,000,000	Judaism	11,000,000
Mohammedanism	202,000,000	Polytheism	145,000,000
Buddhism	120,000,000	Old Indian Religions	12,000,000
		Miscellaneous	3,000,000

CHRISTIANITY

Churches.	Total.	Churches.	Total.
Roman Catholic Ch'rch	264,000,500	Orthodox Russians	109,000,000
Protestant Churches	167,000,000	Oriental Schism	6,500,000
Orthodox Greek Ch'rch	109,000,000		

Continents	Catholics	Protestants	Greek Orthodox Churches	Orthodox Russians	Oriental Schism	Total Christians
Europe	177,657,261	97,293,434	97,059,644	1,736,464	220,394	373,975,951
Asia	11,513,276	1,926,108	12,034,149	436,907	2,726,053	28,636 493
Africa	3,004,563	1,663,341	53,479	.....	3,608,466	8,329,849
America	71,687,261	62,556,967	.....	.....	.....	133,907,846
Australia and Oceanica	979,943	3,187,259	.....	.....	.....	4,167 202
Total	264,502,922	166,627,109	109,147,272	2,173,371	6,554,913	549,017,341

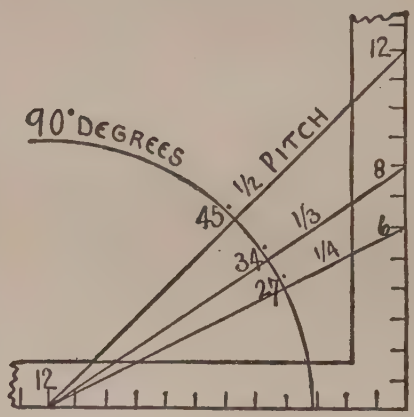
Out of the total population of the world, which amounts to 1,539 millions (according to Yuraschke), 35.7 per cent are Christians, 13.1 per cent Mohammedans, 0.7 per cent Jews, or, 762,102,000 are Monotheists against 776,000,000 who are Polytheists—i. e., nearly half of the population the world believe in one God.

CARPENTER'S RULES

ROOF FRAMING

Definition of Terms.—The "gable" is the triangular end of a common double-roofed building. By the "pitch" of a roof is meant the relation which the height of the ridge above the level of the roof-plates bears to the span, or the distance between the studs on which the roof rests. Thus a roof that is one-half as high as the width of the building is "half-pitch," one that is one-fourth as high as the width is "quarter-pitch," etc.

The following illustration from Hodgson's "Practical Treatise on the Steel Square," not only shows the most common pitches, but also gives the degrees:



"Most carpenters," says Mr. Hodgson, "know that half-pitch is 45 degrees, yet few know third-pitch is nearly 34, and quarter-pitch about 27 degrees.

"A building 24 feet wide (as the rafters come to the center) has a 12-foot run and half-pitch, the rise would also be 12 feet, and the length of the rafter would be 17 feet (the diagonal of 12). Length, cuts, etc., could all be figured from the one illustration."

The Length of Rafters for the most common pitches can be found as follows from any given span:

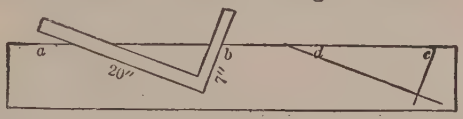
If ¼ pitch, multiply span by .559, or 7-12 nearly.
If ⅓ " " " " .6 , or 3-5 "
If ⅜ " " " " .625, or ⅝ "
If ½ " " " " .71 , or 7-10 "
If ⅝ " " " " .8 , or 4-5 "
If full " " " " 1.12 , or 1⅛ "

To lengths thus obtained must be added amount of projection of rafters at the eaves.

As rafters must be purchased of even lengths, a few inches more or less on their lengths will make a difference to the pitch so slight that it cannot be detected by the eye.

Example.—To determine the length of rafters for a roof constructed one-half pitch, with a span of 24 feet—24×.71= 17.04; or, practically, just 17 feet. A projection of one foot for eaves makes the length to be purchased 18 feet.

How to Find Bevels and Length of Rafters



How to Find the Length and Bevels of Rafters.

1. **Bevels.**—Place your steel square on a board (say the building is 40 feet long), with the corner 20 inches from the edge of the board one way and 7 inches the other, and mark it as shown in the above figure. The angle at *c* will be the bevel of the upper end, and the angle at *d* at the lower end of the rafter.

2. **Length.**—From *a* to *b* on the outer edge of the board is the length of the rafter. The 20 inches shows the 20 feet, or half the width of the building; the 7 inches the 7 foot rise. The distance from *a* to *b*, on the edge of the board, is 21 inches, two-twelfths and one-quarter of a twelfth (always use a square with inches on one side divided into twelfths), therefore this rafter will be 21 feet and 2¼ inches long.

How to Determine Curves for Brick and Stone Arches

Measure width required and draw the figure above indicated. If the points in the figures are equal on both sides, the curve will be an exact part of a circle.

To Find the Area of a Gable End

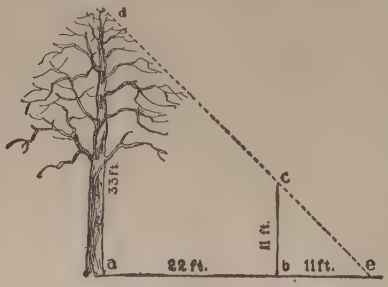
Multiply the width of the building by the height of the roof, and take one-half of the result. Or, if the roof is quarter-pitch, find the area by multiplying the width of the roof by ⅛ of itself.

To Find Number of Feet of Stock Boards to Cover a House

Multiply the distance around the house by the height of the post, and add the area of the two gable ends to the result.

How to Find the Height of a Tree

Measure off on the ground from the base of the tree the number of feet you desire your log to be in length (allowing for the height of the stump), then measure back one-third of the distance and place there a pole as many feet long as this last measurement; let some one hold it from the height of prospective stump from the ground, then place your eye at the outer end of the line measured from the tree and look over the pole towards the tree. The point where the eye strikes the tree is the height which will give you the log of the required length.



Example.—Suppose a log 33 feet long is wanted—measure off 33 feet out from the base of the tree, and then measure back again 11 feet. At this point (indicated by *b* in the cut), have some one hold an 11-foot pole at the height from the ground that the stump is to have; then put your eye at *e*, look over the top of the pole at *c*, and your eye will strike the tree at *d*, which will be 33 feet from *a*, the point where the tree is to be cut down.

CITIES OF TWENTY-FIVE HUNDRED AND OVER

ALABAMA	1900	1890
Anniston city	9,695	9,998
Avondale town	3,060	1,642
Bessemer town	6,358	4,544
Birmingham city	38,415	26,178
Decatur city	3,114	2,765
Demopolis city	2,606	1,898
Dothan town	3,275	247
Eufaula city	4,532	4,394
Florence city	6,478	6,012
Gadsden town	4,282	2,901
Girard city	3,840	.....
Greenville city	3,162	2,806
Huntsville town	8,068	7,995
Lauett town	2,909	777
Mobile city	38,469	31,076
Montgomery city	30,346	21,883
New Decatur city	4,437	3,565
Opelika city	4,245	3,703
Phoenix city	4,163	3,700
Pratt City town	3,485	1,946
Selma city	8,713	7,622
Sheffield city	3,333	2,731
Talladega city	5,056	2,063
Troy city	4,097	3,449
Tuscaloosa city	5,094	4,215
Union Springs town	2,634	2,049
Woodlawn town	2,848	1,506
ALASKA.		
Nome city	12,488	.....
Skagway city	3,117	.....
ARIZONA.		
Jerome town	2,861	250
Phoenix city	5,544	3,152
Prescott city	3,559	1,759
Tucson city	7,531	5,150
ARKANSAS.		
Arkadelphia town	2,739	2,455
Camden city	2,840	2,571
Eureka Springs city	3,572	3,706
Fayetteville city	4,061	2,942
Fort Smith city	11,587	11,311
Helena city	5,550	5,189
Hot Springs city	9,973	8,086
Jonesboro city	4,508	2,065
Little Rock city	38,307	25,874
Mena town	3,423	.....
Newport town	2,866	1,571
Paragould city	3,324	1,666
Pine Bluff city	11,496	9,952
Texarkana city	4,914	3,528
Van Buren city	2,573	2,291
CALIFORNIA.		
Alameda city	16,464	11,165
Bakersfield city	4,836	2,626
Benicia city	2,751	2,361
Berkeley city	13,214	5,101
Chico city	2,640	2,894
Eureka city	7,327	4,858
Fresno city	12,470	10,818
Grass Valley city	4,719	.....
Hanford city	2,929	942
Los Angeles city	102,479	50,395
Marysville city	3,497	3,991

CALIFORNIA—CONT.	1900	1890
Napa city	4,036	4,395
Nevada City town	3,250	2,524
Oakland city	66,960	48,682
Pasadena city	9,117	4,882
Petaluma city	3,871	3,692
Pomona city	5,526	3,634
Red Bluff city	2,750	2,608
Redding city	2,946	1,821
Redlands city	4,797	1,904
Riverside city	7,973	4,683
Sacramento city	29,282	26,386
Salinas city	8,304	2,339
San Bernardino city	6,150	4,012
San Diego city	17,700	16,159
San Francisco city	342,782	298,997
San Jose city	21,500	18,060
San Luis Obispo city	3,021	2,995
San Rafael city	3,879	3,290
Santa Ana city	4,933	3,628
Santa Barbara city	6,587	5,864
Santa Clara town	3,650	2,891
Santa Cruz city	5,659	5,596
Santa Monica city	3,057	1,580
Santa Rosa city	6,673	5,220
Stockton city	17,506	14,424
Vallejo city	7,965	6,343
Visalia city	3,085	2,885
Watsonville city	3,528	2,149
Woodland city	2,886	3,069
COLORADO.		
Aspen city	3,303	5,108
Boulder city	6,150	3,330
Canyon City	3,775	2,825
Central City town	3,114	2,480
Colorado City town	2,914	1,788
Colorado Springs city	21,085	11,140
Cripple Creek town	10,147	.....
Denver city	133,859	106,713
Durango city	3,317	2,726
Florence city	3,728	.....
Fort Collins city	3,053	2,011
Grand Junction city	3,503	2,030
Greeley city	3,023	2,395
Idaho Springs town	2,502	1,338
La Junta town	2,513	1,439
Leadville city	12,455	10,384
Pueblo city	28,157	24,558
Salida city	3,722	2,586
Trinidad city	5,345	5,523
Victor town (Teller co	4,986	.....
CONNECTICUT.		
Ansonia city	12,681	.....
Berlin town	3,448	2,600
Bethel borough	2,561	2,335
Branford town	5,706	4,460
Bridgeport city	70,996	48,866
Bristol borough	6,268	.....
Canton town	2,678	2,500
Danbury city	16,537	16,552
Danielson borough	2,823	.....
Darien town	3,116	2,276
Derby city	7,930	.....
East Hartford town	6,406	4,455
East Windsor town	3,158	2,890
Enfield town	6,699	7,199
Essex town	2,530	2,035

CONNECTICUT—cont.	1900	1890
Fairfield town	4,489	3,868
Farmington town	3,331	3,179
Glastonbury town	4,260	3,457
Greenwich town	12,172	10,131
Griswold town	3,490	3,113
Groton town	5,962	5,539
Guilford town	2,785	2,780
Hamden town	4,626	3,882
Hartford city	79,850	53,230
Litchfield town	3,214	3,304
Manchester town	10,601	8,222
Meriden city	24,296	21,652
Middletown city	9,589	9,013
Milford town	3,783	3,811
Naugatuck borough	10,541	.....
New Britain city	25,998	16,519
New Canaan town	2,968	2,701
New Hartford town	3,424	3,160
New Haven city	108,027	81,298
New London city	17,548	13,757
New Milford town	4,804	3,917
Newtown town	3,276	3,539
Norwalk city	6,125	.....
Norwich city	17,251	16,156
Plainfield town	4,821	4,582
Plymouth town	2,828	2,147
Portland town	3,856	4,687
Preston town	2,807	2,555
Putnam city	6,667	.....
Ridgefield town	2,626	2,235
Rockville city	7,287	7,772
Salisbury town	3,489	3,420
Seymour town	3,541	3,300
Shelton borough	2,837	1,952
Southington borough	3,411	.....
South Norwalk city	6,591	.....
Stafford town	4,297	4,535
Stamford city	15,997	.....
Stonington town	8,540	7,184
Stratford town	3,657	2,608
Suffield town	3,521	3,169
Thomaston town	3,300	3,278
Thompson town	6,442	5,580
Torrington borough	8,360	4,283
Wallingford borough	6,737	4,230
Waterbury city	45,859	28,646
Waterford town	2,904	2,661
Watertown town	3,100	2,323
West Hartford town	3,186	1,930
West Haven borough	5,247	.....
Westport town	4,017	3,715
Wethersfield town	2,637	2,271
Willimantic city	8,937	8,648
Windsor town	3,614	2,954
Windsor Locks town	3,062	2,758
Winsted borough	6,804	4,846
DELAWARE.		
Dover town	3,329	3,061
Milford town	2,500	2,565
Newcastle city	3,380	4,010
Wilmington city	76,508	61,431
DISTRICT OF COLUMBIA.		
Washington city	278,718	230,392

FLORIDA.	1900	1890
Apalachicola city	3,077	2,727
Fernandina city	3,245	2,803
Gainesville city	3,633	2,790
Jacksonville city	28,429	17,201
Key West city	17,114	18,080
Lake City town	4,013	2,020
Ocala city	3,380	2,904
Palatka city	3,301	3,039
Pensacola city	17,747	11,750
St. Augustine city	4,272	4,742
Tallahassee city	2,981	2,934
Tampa city	15,839	5,532
GEORGIA.		
Albany city	4,606	4,008
Americus city	7,674	6,398
Athens city	10,245	8,639
Atlanta city	89,872	65,533
Augusta city	39,441	33,300
Bainbridge town	2,641	1,668
Barnesville town	3,036	1,839
Brunswick city	9,081	8,459
Cartersville city	3,135	3,171
Cedartown town	2,823	1,625
Columbus city	17,614	17,303
Cordele town	3,473	1,578
Cuthbert town	2,641	2,328
Dalton city	4,315	3,046
Dawson town	2,926	2,284
Dublin city	2,987	862
Elberton city	3,834	1,572
Gainesville city	4,382	3,202
Griffin city	6,857	4,503
La Grange city	4,274	3,090
Macon city	23,272	22,746
Marietta city	4,446	3,384
Milledgeville city	4,219	3,322
Newnan city	3,654	2,859
Rome city	7,291	6,957
Savannah city	54,244	43,189
Summerville town	3,245	.....
Thomasville town	5,322	5,514
Valdosta city	5,613	2,854
Washington village	3,300	2,631
Waycross town	5,919	3,364
HAWAII.		
Honolulu city	39,306	22,907
IDAHO.		
Boise city	5,957	2,311
Pocatello city	4,046	.....
ILLINOIS.		
Alton city	14,210	10,294
Anna city	2,618	2,295
Aurora city	24,147	19,688
Batavia city	3,871	3,543
Beardstown city	4,827	4,226
Belleville city	17,484	15,361
Belvidere city	6,937	3,867
Bloomington city	23,286	20,484
Blue Island village	6,114	3,329
Braidwood city	3,279	4,641
Cairo city	12,566	10,324

CITIES OF TWENTY-FIVE HUNDRED AND OVER

ILLINOIS —cont	1900	1890
Canton city	6,564	5,604
Carbondale city	3,318	2,382
Carlinville city	3,502	3,293
Carmi city	2,939	2,785
Centralia city	6,721	4,763
Champaign city	9,098	5,839
Charleston city	5,488	4,135
Chester city	2,832	2,708
Chicago city	1,698,575	1,099,850
Chicago Heights villag	5,100	.....
Clinton city	4,452	2,598
Coal City	2,607	1,672
Collinsville city	4,021	3,498
Danville city	16,354	11,491
Decatur city	20,754	16,841
Dekalb city	5,904	2,579
Dixon city	7,917	5,161
Duquoin city	4,353	4,052
East St. Louis city	29,655	15,169
Edwardsville city	4,157	3,561
Effingham city	3,774	3,260
Elgin city	22,433	17,823
Evanston city	19,259	.....
Freeport city	13,258	10,189
Fulton city	2,685	2,099
Galena city	5,005	5,635
Galesburg city	18,607	15,264
Galva town	2,682	2,409
Geneseo city	3,356	3,182
Granite city	3,122	.....
Greenville city	2,504	1,868
Harlem village	4,085	.....
Harvard city	2,602	1,967
Harvey city	5,395	.....
Havana city	3,268	2,525
Highland Park city	2,806	2,163
Hinsdale village	2,578	1,584
Hoopeston city	3,823	1,911
Jacksonville city	15,078	12,935
Jerseyville city	3,517	3,207
Joliet city	29,353	23,264
Kankakee city	13,595	9,025
Kewanee city	8,382	4,569
Lagrange village	3,969	2,314
Lasalle city	10,446	9,855
Lewistown city	2,504	2,166
Lincoln city	8,962	6,725
Litchfield city	5,918	5,811
Lockport village	2,659	2,449
Macomb city	5,375	4,052
Marion city	2,510	1,338
Marseilles city	2,559	2,210
Mattoon city	9,622	6,833
Maywood village	4,532	.....
Melrose Park village	2,592	.....
Mendota city	3,736	3,542
Metropolis city	4,069	3,573
Minonk city	2,545	2,316
Moline city	17,248	12,000
Monmouth city	7,460	5,936
Morris city	4,273	3,653
Mound City	2,705	.....
Mt. Carmel city	4,311	3,376
Mt. Olive village	2,935	1,986
Mt. Vernon city	5,216	3,233

ILLINOIS—cont	1900	1890
Murphysboro city	6,463	3,880
Naperville city	2,629	2,216
Normal town	3,795	3,459
Olney city	4,260	3,831
Ottawa city	10,588	9,985
Pana city	5,530	5,077
Paris city	6,105	4,996
Paxton city	3,036	2,187
Pekin city	8,420	6,347
Peoria city	56,100	41,024
Peru city	6,863	5,550
Petersburg city	2,807	2,342
Pontiac city	4,266	2,784
Princeton city	4,023	3,396
Quincy city	36,252	31,494
Rockford city	31,051	23,584
Rock Island city	19,493	13,634
St. Charles city	2,675	1,690
Sandwich city	2,520	2,516
Savanna city	3,325	3,097
Shelbyville city	3,546	3,162
Sparta city	2,941	1,979
Springfield city	34,159	24,963
Spring Valley city	6,214	3,837
Staunton city	2,786	2,209
Sterling city	6,309	5,824
Streator city	14,079	11,414
Sycamore city	3,653	2,987
Taylorville city	4,248	2,829
Toluca city	2,629	.....
Tuscola city	2,569	1,897
Urbana city	5,728	3,511
Vandalia city	2,665	2,144
Watseka city	2,505	2,017
Waukegan city	9,426	4,915
West Hammond villa	2,935	.....
Woodstock city	2,502	1,683

INDIANA.

Alexandria city	7,221	715
Anderson city	20,178	10,741
Attica city	3,005	2,320
Auburn city	3,396	2,415
Aurora city	3,645	3,929
Bedford city	6,115	3,351
Bloomington city	6,460	4,018
Bluffton city	4,479	3,589
Boonville town	2,849	1,881
Brazil city	7,786	5,905
Clinton city	2,918	1,365
Columbia City	2,975	3,027
Columbus city	8,130	6,719
Connersville city	6,836	4,548
Crawfordsville city	6,649	6,089
Decatur city	4,142	3,142
Dunkirk city	3,187	1,024
East Chicago city	3,411	1,255
Elkhart city	15,184	11,360
Elwood city	12,950	2,284
Evansville city	59,007	50,756
Fairmount town	3,205	1,462
Fort Wayne city	45,115	35,393
Frankfort city	7,100	5,919
Franklin city	4,005	3,781

INDIANA—cont.	1900	1890
Garrett city	3,910	2,767
Gas City	3,622	145
Goshen city	7,810	6,033
Greencastle city	3,661	4,390
Greenfield city	4,489	3,100
Greensburg city	5,034	3,596
Hammond city	12,376	5,428
Hartford City	5,912	2,287
Huntingburg city	2,527	3,167
Huntington city	9,491	7,328
Indianapolis city	169,164	105,436
Jeffersonville city	10,774	10,666
Kendallville city	3,354	2,960
Kokomo city	10,609	8,261
Lafayette city	18,116	16,243
Laporte city	7,113	7,126
Lawrenceburg city	4,326	4,284
Lebanon city	4,465	3,682
Linton city	3,071	958
Logansport city	16,204	13,328
Madison city	7,835	8,936
Marion city	17,337	8,769
Martinsville city	4,038	2,680
Michigan City	14,850	10,776
Mishawaka city	5,560	3,371
Montpelier city	3,405	808
Mt. Vernon city	5,132	4,705
Muncie city	20,942	11,345
New Albany city	20,628	21,059
New Castle town	3,406	2,697
Noblesville city	4,792	3,054
North Vernon city	2,823	2,012
Peru city	8,463	7,028
Plymouth city	3,656	2,723
Portland city	4,798	3,725
Princeton city	6,041	3,076
Richmond city	18,226	16,608
Rochester town	3,421	2,467
Rockport town	2,882	2,314
Rushville city	4,541	3,475
Seymour city	6,445	5,337
Shelbyville city	7,169	5,451
South Bend city	35,999	21,819
Sullivan town	3,118	2,222
Tell City	2,680	2,094
Terre Haute city	36,673	30,217
Tipton city	3,764	2,697
Union City	2,716	2,681
Valparaiso city	6,280	5,090
Vincennes city	10,249	8,853
Wabash city	8,618	5,105
Warsaw city	3,987	3,574
Washington city	8,551	6,064
Whiting town	3,983	1,408
Winchester city	3,705	3,014
INDIAN TERRITORY.		
Ardmore town	5,681	.....
Chickasha town	3,209	.....
Coalgate town	2,614	.....
Durant town	2,969	.....
Muscogee town	4,254	.....
South McAlester town	3,479	.....

IOWA.	1900	1890
Albia city	2,889	2,359
Algona city	2,911	2,068
Anamosa city	2,891	2,078
Atlantic city	5,046	4,351
Belle Plaine city	3,283	2,623
Boone city	8,880	6,520
Burlington city	23,201	22,565
Carroll city	2,882	2,448
Cedar Falls city	5,319	3,459
Cedar Rapids city	25,656	18,020
Centerville city	5,256	3,668
Chariton city	3,989	3,122
Charles City	4,227	2,802
Cherokee city	3,865	3,441
Clarinda city	3,276	3,262
Clinton city	22,698	13,619
Council Bluffs city	25,802	21,474
Cresco city	2,806	2,018
Creston city	7,752	7,200
Davenport city	35,254	26,872
Decorah city	3,246	2,801
Denison city	2,771	1,782
Des Moines city	62,139	50,093
Dubuque city	36,297	30,311
Eaglegrove city	3,557	1,881
Estherville city	3,237	1,475
Fairfield city	4,689	3,391
Fort Dodge city	12,162	4,871
Fort Madison city	9,278	7,901
Glenwood city	3,040	1,890
Grinnell city	3,860	3,332
Hampton city	2,727	2,067
Independence city	3,656	3,163
Indianola city	3,261	2,254
Iowa City	7,987	7,016
Iowa Falls city	2,840	1,796
Jefferson city	2,601	1,875
Keokuk city	14,641	14,101
Knoxville city	3,131	2,632
Lake City	2,703	1,160
Le Mars city	4,146	4,036
Manchester city	2,887	2,844
Maquoketa city	3,777	3,077
Marion city	4,102	3,094
Marshalltown city	11,544	8,914
Muson City	6,746	4,007
Missouri Valley city	4,010	2,797
Mt. Pleasant city	4,109	3,997
Muscatine city	14,073	11,454
Newton city	3,682	2,564
Oelwein city	5,142	830
Osage city	2,734	1,913
Osceola city	2,505	2,120
Oskaloosa city	9,212	6,558
Ottumwa city	18,197	14,001
Pella city	2,623	2,408
Perry city	3,986	2,880
Red Oak city	4,355	3,321
Shenandoah city	3,573	2,440
Sioux City	33,111	37,806
Spencer city	3,095	1,813
Tama city	2,649	1,741
Tipton city	2,513	1,599
Vinton city	3,499	2,865

CITIES OF TWENTY-FIVE HUNDRED AND OVER

IOWA—cont.	1900	1890
Washington city	4,255	3,235
Waterloo city	12,580	6,674
Waverly city	3,177	2,346
Webster City	4,613	2,829
What Cheer city	2,746	3,246
Winterset city	3,039	2,281
KANSAS.		
Abilene city	3,507	3,547
Argentine city	5,878	4,732
Arkansas City	6,140	8,347
Atchison city	15,722	13,963
Chanute city	4,208	2,826
Cherryvale city	3,472	2,104
Clay Center city	3,069	2,802
Coffeyville city	4,953	2,282
Concordia city	3,401	3,184
Eldorado city	3,466	3,339
Emporia city	8,223	7,551
Fort Scott city	10,322	11,946
Galena city	10,155	2,496
Hiawatha city	2,829	2,486
Holton city	3,082	2,727
Horton city	3,398	3,316
Hutchinson city	9,379	8,682
Independence city	4,851	3,127
Iola city	5,791	1,706
Junction city	4,695	4,502
Kansas City	51,418	38,316
Lawrence city	10,862	9,997
Leavenworth city	20,735	19,768
McPherson city	2,996	3,172
Manhattan city	3,438	3,004
Newton city	6,208	5,605
Olathe city	3,451	3,294
Osage city	2,792	3,469
Osawatomie city	4,191	2,662
Ottawa city	6,934	6,248
Paola city	3,144	2,943
Parsons city	7,682	6,736
Pittsburg city	10,112	6,697
Rosedale city	3,270	2,276
Salina city	6,074	6,149
Topeka city	33,608	31,007
Weir city	2,977	2,138
Wellington city	4,245	4,391
Wichita city	24,671	23,853
Winfield city	5,554	5,184
KENTUCKY.		
Ashland city	6,800	4,195
Bellevue city	6,332	3,163
Bowling Green city	8,226	7,803
Catlettsburg city	3,081	1,374
Covington city	42,938	37,371
Cynthiana city	3,257	3,016
Danville city	4,285	3,766
Dayton city	6,104	4,264
Earlington city	3,012	1,748
Frankfort city	9,487	7,892
Fulton town	2,860	1,818
Georgetown town	3,823	.....
Harrodsburg city	2,876	3,230
Henderson city	10,272	8,335
Hopkinsville city	7,290	5,833
Lebanon city	3,043	2,816
Lexington city	26,369	21,567

KENTUCKY—cont.	1900	1890
Louisville city	204,731	161,129
Ludlow town	3,334	2,469
Madisonville city	3,628	2,212
Mayfield city	4,081	2,909
Maysville city	6,423	5,358
Middlesboro town	4,162	3,271
Mt. Sterling city	3,561	3,629
Newport city	28,301	24,918
Owensboro city	13,189	9,837
Paducah city	19,446	12,797
Paris city	4,603	4,218
Princeton town	2,556	1,857
Richmond city	4,653	5,073
Russellville city	2,591	2,253
Shelbyville city	3,016	2,675
Somerset city	3,384	2,625
Winchester city	5,964	4,519
LOUISIANA.		
Alexandria town	5,648	2,861
Baton Rouge city	11,269	10,478
Crowley town	4,214	420
Donaldsonville town	4,105	3,121
Franklin town	2,692	2,127
Houma town	3,212	1,280
Lafayette town	3,314	2,106
Lake Charles town	6,680	3,442
Monroe city	5,428	3,256
New Iberia town	6,815	3,447
New Orleans city	287,104	242,039
Opelousas town	2,951	1,572
Plaquemine town	3,590	3,222
Shreveport city	16,013	11,979
Thibodaux town	3,253	2,078
MAINE.		
Auburn city	12,951	11,250
Augusta city	11,683	10,527
Bangor city	21,850	19,103
Bath city	10,477	8,723
Belfast city	4,615	5,294
Biddeford city	16,145	14,443
Brewer city	4,835	4,193
Bridgton town	2,868	2,605
Bristol town	2,572	2,821
Brunswick village	5,210	.....
Calais city	7,655	7,290
Camden town	2,825	4,621
Caribou town	4,758	4,087
Chelsea town	3,092	2,356
Dexter town	2,941	2,732
Eastport city	5,311	4,908
Eden town	4,379	1,946
Ellsworth city	4,297	4,804
Fairfield town	3,878	3,510
Farmington town	3,288	3,207
Fort Fairfield town	4,181	3,526
Fort Kent town	2,528	1,826
Gardiner city	5,501	5,491
Gorham town	2,510	2,888
Hallowell city	2,714	3,181
Houlton town	4,686	4,015
Jay town	2,758	1,541
Kennebunk town	3,228	3,172
Kittery town	2,872	2,864
Lewiston city	23,761	21,701

MAINE—cont.	1900	1890
Lisbon town	3,603	3,120
Lubec town	3,005	2,069
Madison town	2,764	1,815
Norway town	2,902	2,665
Old Town city	5,763	5,312
Orono town	3,257	2,790
Paris town	3,225	3,156
Pittsfield town	2,891	2,503
Portland city	50,145	36,425
Presque Isle town	3,804	3,046
Rockland city	8,150	8,174
Rumford Falls village	2,595	.....
Saco city	6,122	6,075
Sanford town	6,078	4,201
Skowhegan village	4,266	.....
South Berwick town	3,188	3,434
South Portland city	6,287	.....
Thomaston town	2,688	3,009
Waldoboro town	3,145	3,505
Waterville city	9,477	7,107
Westbrook city	7,283	6,632
York town	2,668	2,444
MARYLAND.		
Annapolis city	8,525	7,604
Baltimore city	508,957	434,439
Cambridge town	5,747	4,192
Chestertown town	3,008	2,632
Crisfield town	3,165	1,665
Cumberland city	17,128	12,729
Easton town	3,074	2,939
Elkton town	2,542	2,318
Frederick city	9,296	8,193
Frostburg town	5,274	3,804
Hagerstown city	13,591	10,118
Havre de Grace city	3,423	3,244
Salisbury town	4,277	2,905
Westminster town	3,199	2,903
MASSACHUSETTS.		
Abington town	4,489	4,260
Adams town	11,134	9,213
Agawam town	2,536	2,352
Amesbury town	9,473	9,798
Amherst town	5,028	4,512
Andover town	6,813	6,142
Arlington town	8,603	5,629
Athol town	7,061	6,319
Attleboro town	11,335	7,577
Barnstable town	4,364	4,023
Belmont town	3,929	2,098
Beverly city	13,884	10,821
Billerica town	2,775	2,380
Blackstone town	5,721	6,138
Boston city	560,892	448,477
Braintree town	5,981	4,848
Bridgewater town	5,806	4,249
Brockton city	40,063	27,294
Brookfield town	3,062	3,352
Brookline town	19,935	12,103
Cambridge city	91,886	70,028
Canton town	4,584	4,538
Chelmsford town	3,984	2,695
Chelsea city	34,072	27,909
Chicopee city	19,167	14,050
Clinton town	13,667	10,424
Cohasset town	2,759	2,448

MASSACHUSETTS—cont.	1900	1890
Concord town	5,652	4,427
Dalton town	3,014	2,885
Danvers town	8,542	7,464
Dartmouth town	3,669	3,122
Dedham town	7,457	7,123
Dracut town	3,253	1,996
Dudley town	3,553	2,944
East Bridgewater town	3,025	2,911
Easthampton town	5,603	4,395
Easton town	4,837	4,493
Everett city	24,336	11,068
Fairhaven town	3,567	2,919
Fall River city	104,863	74,398
Falmouth town	3,500	2,567
Fitchburg city	31,531	22,037
Foxboro town	3,266	2,933
Framingham town	11,302	9,239
Franklin town	5,017	4,831
Gardner town	10,813	8,424
Gloucester city	26,121	24,651
Grafton town	4,869	5,002
Great Barrington town	5,854	4,612
Greenfield town	7,927	5,252
Hardwick town	3,203	2,922
Haverhill city	37,175	27,412
Hingham town	5,059	4,564
Holliston town	2,598	2,619
Holyoke city	45,712	35,637
Hopkinton town	2,623	4,088
Hudson town	5,454	4,670
Hyde Park town	13,244	10,193
Ipswich town	4,658	4,439
Lawrence city	62,559	44,654
Lee town	3,596	3,785
Leicester town	3,416	3,120
Lenox town	2,942	2,889
Leominster town	12,392	7,269
Lexington town	3,831	3,197
Lowell city	94,969	77,696
Ludlow town	3,536	1,939
Lynn city	68,513	55,727
Malden city	33,664	23,031
Manchester town	2,522	1,789
Mansfield town	4,006	3,432
Marblehead town	7,582	8,202
Marlboro city	13,609	13,805
Maynard town	3,142	2,700
Medfield town	2,926	1,493
Medford city	18,244	11,079
Medway town	2,761	2,985
Melrose city	12,962	8,519
Methuen town	7,512	4,814
Middleboro town	6,885	6,065
Milford town	11,376	8,780
Millbury town	4,460	4,428
Milton town	6,578	4,278
Monson town	3,402	3,650
Montague town	6,150	6,296
Nantucket town	3,006	3,268
Natick town	9,488	9,118
Needham town	4,016	3,035
New Bedford city	62,442	40,733
Newburyport city	14,478	13,947
Newton city	33,587	24,379
North Adams city	24,200	16,074
North Hampton city	18,643	14,990
North Andover town	4,243	3,742
North Attleboro town	7,253	6,727
Northbridge town	7,036	4,603

CITIES OF TWENTY-FIVE HUNDRED AND OVER

MASSACHUSETTS—cont.	1900	1890
North Brookfield town	4,587	3,871
Norwood town	5,480	3,733
Orange town	5,520	4,668
Oxford town	2,677	2,616
Palmer town	7,801	6,520
Peabody town	11,523	10,158
Pepperell town	3,701	3,127
Pittsfield city	21,766	17,281
Plymouth town	9,592	7,314
Provincetown town	4,247	4,642
Quincy city	23,899	16,723
Randolph town	3,993	3,916
Reading town	4,969	4,088
Revere town	10,395	5,668
Rockland town	5,327	5,213
Rockport town	4,592	4,087
Salem city	35,956	30,801
Saugus town	5,084	3,673
Somerville city	61,643	40,152
Southbridge town	10,025	7,655
South Hadley town	4,526	4,261
Spencer town	7,627	8,747
Springfield city	62,059	44,179
Stoneham town	6,197	6,155
Stoughton town	5,442	4,852
Sutton town	3,328	3,180
Swampscott town	4,548	3,198
Taunton city	31,036	25,448
Templeton town	3,489	2,999
Tewksbury town	3,683	2,515
Uxbridge town	3,599	3,408
Wakefield town	9,290	6,982
Walpole town	3,572	2,604
Waltham city	23,481	18,707
Ware town	8,263	7,329
Wareham town	3,432	3,451
Warren town	4,417	4,681
Watertown town	9,706	7,073
Webster town	8,804	7,031
Wellesley town	5,072	3,600
Westboro town	5,400	5,195
Westfield town	12,310	9,805
Westford town	2,624	2,250
Westport town	2,890	2,599
West Springfield town	7,105	5,077
Weymouth town	11,324	10,866
Whitman town	6,155	4,441
Williamstown town	5,013	4,221
Winchendon town	5,001	4,390
Winchester town	7,248	4,861
Winthrop town	6,058	2,726
Woburn city	14,254	13,499
Worcester city	118,421	84,655
Wrentham town	2,720	2,566
MICHIGAN.		
Adrian city	9,654	8,756
Albion city	4,519	3,763
Allegan village	2,667	2,669
Alpena city	11,802	11,283
Ann Arbor city	14,509	9,431
Battle Creek city	18,563	13,197
Bay City	27,628	27,839
Belding city	3,282	1,730
Benton Harbor city	6,562	3,692
Bessemer city	3,911	2,566
Big Rapids city	4,686	5,303
Cadillac city	5,997	4,461

MICHIGAN—cont.	1900	1890
Charlotte city	4,092	3,867
Cheboygan city	6,489	6,235
Coldwater city	6,216	5,247
Crystal Falls city	3,231	.....
Delray village	4,573	.....
Detroit city	285,704	205,876
Dowagiac city	4,151	2,806
Escanaba city	9,549	6,808
Flint city	13,103	9,803
Gladstone city	3,380	1,337
Grand Haven city	4,743	5,023
Grand Rapids city	87,565	60,278
Greenville city	3,381	3,056
Hancock village	4,050	1,772
Hastings city	3,172	2,972
Hillsdale city	4,151	3,915
Holland city	7,790	3,945
Houghton village	3,359	2,062
Howell village	2,518	2,387
Ionia city	5,209	4,482
Iron Mountain city	9,242	8,599
Ironwood city	9,705	7,745
Ishpeming city	13,255	11,197
Jackson city	25,180	20,798
Kalamazoo city	24,404	17,853
Lake Linden village	2,597	1,862
Lansing city	16,485	13,102
Lapeer city	3,297	2,753
Laurium village	5,643	1,159
Ludington city	7,166	7,517
Manistee city	14,260	12,812
Manistique village	4,126	2,940
Marine City	3,829	3,268
Marquette city	10,058	9,093
Marshall city	4,370	3,968
Menominee city	12,818	10,630
Monroe city	5,043	5,258
Mt. Clemens city	6,576	4,748
Mt. Pleasant city	3,662	2,701
Muskegon city	20,818	22,702
Negaunee city	6,935	6,078
Niles city	4,287	4,197
Norway city	4,170	.....
Owosso city	8,696	6,564
Petoskey city	5,285	2,872
Pontiac city	9,769	6,200
Port Huron city	19,158	13,543
Red Jacket village	4,668	3,073
Saginaw city	42,345	46,322
St. Clair city	2,543	2,353
St. Johns village	3,388	3,127
St. Joseph city	5,155	3,733
Sault Ste. Marie city	10,538	5,760
South Haven village	4,009	1,924
Three Rivers city	3,550	3,131
Traverse City	9,407	4,833
West Bay City	13,119	12,981
Wyandotte city	5,183	3,817
Ypsilanti city	7,378	6,129
MINNESOTA.		
Albert Lea city	4,500	3,305
Alexandria village	2,681	2,118
Anoka city	3,769	4,252
Austin city	5,474	3,901
Blue Earth City	2,900	1,569
Brainerd city	7,524	5,703
Cloquet village	3,072	2,530

MINNESOTA.—cont.	1900	1890
Crookston city	5,359	3,457
Duluth city	52,969	33,115
Ely city	3,717	901
Eveleth village	2,752	.....
Fairmont village	3,040	1,205
Faribault city	7,868	6,520
Fergus Falls city	6,072	3,772
Hastings city	3,811	3,705
Lake City	2,744	2,128
Little Falls city	5,774	2,354
Mankato city	10,599	8,838
Minneapolis city	202,718	164,738
Moorhead city	3,730	2,088
New Ulm city	5,403	3,741
Northfield city	3,210	2,659
Owatonna city	5,561	3,849
Pipestone village	2,536	1,232
Red Wing city	7,525	6,294
Rochester city	6,843	5,321
St. Cloud city	8,663	7,686
St. James city	2,607	939
St. Paul city	163,065	133,156
St. Peter city	4,302	3,671
Stillwater city	12,318	11,250
Two Harbors village	3,278	.....
Virginia city	2,962	.....
Wabasha city	2,528	2,487
Waseca city	3,103	2,482
Willmar village	3,409	1,825
Winona city	19,714	18,208
MISSISSIPPI.		
Aberdeen city	3,434	3,449
Bay St. Louis city	2,872	1,974
Biloxi city	5,467	3,234
Brookhaven town	2,678	2,142
Canton city	3,401	2,131
Columbus city	6,484	4,559
Corinth city	3,661	2,111
Greenville town	7,642	6,658
Greenwood city	3,026	1,055
Grenada town	2,568	2,416
Hattiesburg town	4,175	1,172
Holly Springs city	2,815	2,246
Jackson city	7,816	5,920
Laurel town	3,193	.....
McComb town	4,477	2,383
Meridian city	14,050	10,624
Natchez city	12,210	10,101
Vicksburg city	14,834	13,373
Water Valley city	3,813	2,832
Wesson town	3,279	3,168
West Point town	3,193	2,762
Yazoo City	4,944	3,286
MISSOURI.		
Aurora city	6,191	3,482
Boonville city	4,377	4,141
Brookfield city	5,484	4,547
Butler city	3,158	2,812
Cameron city	2,979	2,917
Cape Girardeau city	4,815	4,297
Carrollton city	3,854	3,878
Carterville city	4,445	2,884
Carthage city	9,416	7,981
Chillicothe city	6,905	5,717
Clinton city	5,061	4,737

MISSOURI—cont.	1900	1890
Columbia city	5,651	4,000
De Soto city	5,611	3,960
Fayette city	2,717	2,247
Fulton city	4,883	4,314
Hannibal city	12,780	12,857
Higginsville city	2,791	2,342
Independence city	6,974	6,380
Jefferson City	9,664	6,742
Joplin city	26,023	9,943
Kansas City	163,752	132,716
Kirksville city	5,966	3,510
Kirkwood town	2,825	1,777
Lamar city	2,737	2,860
Lexington city	4,190	4,537
Louisiana city	5,131	5,090
Macon city	4,068	3,371
Marceline city	2,638	1,977
Marshall city	5,086	4,297
Maryville city	4,577	4,037
Mexico city	5,099	4,789
Moberly city	8,012	8,215
Monett city	3,115	1,699
Neosho city	2,725	2,198
Nevada city	7,461	7,262
Poplar Bluff city	4,321	2,187
Rich Hill city	4,053	4,008
Richmond city	3,478	2,895
St. Charles city	7,982	6,161
St. Joseph city	102,979	52,324
St. Louis city	575,238	451,770
Sedalia city	15,231	14,068
Slater city	2,502	2,400
Springfield city	23,267	21,850
Stanberry city	2,654	2,035
Trenton city	5,396	5,039
Warrensburg city	4,724	4,706
Washington city	3,015	2,725
Webb City	9,201	5,043
West Plains city	2,902	2,091
MONTANA.		
Anaconda city	9,453	3,975
Billings city	3,221	836
Bozeman city	3,419	2,143
Butte city	30,470	10,723
Great Falls city	14,930	3,979
Helena city	10,770	13,834
Kalispel city	2,526	.....
Livingston city	2,778	2,850
Missoula city	4,366	3,426
Walkerville city	2,621	1,743
NEBRASKA.		
Alliance city	2,535	829
Auburn city	2,664	1,537
Beatrice city	7,875	13,836
Blair city	2,970	2,069
Columbus city	3,522	3,134
Fairbury city	3,140	2,630
Falls City	3,022	2,102
Fremont city	7,241	6,747
Grand Island city	7,554	7,536
Hastings city	7,188	13,584
Holdrege city	3,007	2,601
Kearney city	5,634	8,074
Lincoln city	40,169	55,154
Nebraska City	7,380	11,911

CITIES OF TWENTY-FIVE HUNDRED AND OVER

NEBRASKA—cont.	1900	1890
Norfolk city	3,883	3,038
North Platte city	3,640	3,055
Omaha city	102,555	140,452
Plattsmouth city	4,964	8,392
South Omaha city	26,001	8,062
Wymore city	2,626	2,420
York city	5,132	3,405
NEVADA.		
Reno town	4,500	3,563
Virginia City	2,695	8,511
NEW HAMPSHIRE.		
Berlin city	8,886	3,729
Claremont town	6,498	5,565
Concord city	19,632	17,004
Conway town	3,154	2,331
Derry town	3,583	2,604
Dover city	13,207	12,790
Exeter town	4,922	4,284
Franklin city	5,846	4,085
Goffstown town	2,528	1,981
Haverhill town	3,414	2,545
Keene city	9,165	7,446
Laconia city	8,042	6,143
Lancaster town	3,190	3,373
Lebanon town	4,965	3,763
Littleton town	4,066	3,365
Manchester city	56,987	44,126
Milford town	8,739	3,014
Nashua city	23,898	19,311
Newmarket town	2,892	2,742
Newport town	3,126	2,623
Pembroke town	3,183	3,172
Peterboro town	2,527	2,507
Portsmouth city	10,637	9,827
Rochester city	8,466	7,396
Somersworth city	7,023	6,207
Walpole town	2,693	2,163
NEW JERSEY.		
Asbury Park city	4,148	.....
Atlantic City	27,838	13,055
Bayonne city	32,722	19,033
Bloomfield town	9,668	7,708
Boonton town	3,901	.....
Bordentown city	4,110	4,232
Boundbrook borough	2,622	1,462
Bridgeton city	13,913	11,424
Burlington city	7,392	7,264
Camden city	75,935	58,313
Carlstadt borough	2,574	1,549
Dover town	5,938	.....
East Newark borough	2,500	.....
East Orange city	21,506	13,282
East Rutherford boro'	2,640	1,438
Elizabeth city	52,130	37,764
Englewood city	6,253	.....
Freehold town	2,934	2,932
Garfield borough	3,504	1,028
Gloucester City	6,840	6,564
Guttenberg town	3,825	1,947
Hackensack town	9,443	6,004
Haddonfield borough	2,776	2,502
Hammonton town	3,481	3,833
Harrison town	10,596	8,338

NEW JERSEY—cont.	1900	1890
Hoboken city	59,364	43,648
Irvington town	5,255	.....
Jersey City	206,433	163,003
Kearney town	10,896	.....
Keyport town	3,413	3,411
Lambertville city	4,637	4,142
Long Branch town	8,872	7,231
Madison borough	3,754	2,469
Millville city	10,583	10,002
Montclair town	13,962	8,656
Morristown town	11,267	9,156
Newark city	246,070	181,830
New Brunswick city	20,006	18,603
Newton town	4,376	3,003
North Plainfield boro	5,009	.....
Orange city	24,141	18,844
Passaic city	27,777	13,028
Paterson city	105,171	78,347
Perth Amboy city	17,699	9,512
Phillipsburg town	10,052	8,644
Plainfield city	15,369	11,267
Princeton borough	3,899	3,422
Rahway city	7,935	7,105
Raritan town	3,244	2,556
Red Bank town	5,428	4,145
Ridgewood village	2,685	1,047
Rutherford borough	4,411	2,293
Salem city	5,811	5,516
Somerville town	4,843	3,861
South Amboy borough	6,349	4,330
South Orange village	4,608	3,106
South River borough	2,792	1,796
Summit city	5,302	3,502
Trenton city	73,307	57,458
Union town	15,187	10,643
Vailsburg borough	2,779	786
Vineland borough	4,370	3,822
Washington borough	3,580	2,834
West Hoboken town	23,094	11,665
West New York town	5,267	.....
West Orange town	6,889	4,358
Woodbury city	4,087	3,911
NEW MEXICO.		
Albuquerque city	6,238	3,785
Gallup town	2,946	.....
Las Vegas city	3,552	2,385
Raton city	3,540	1,255
Santa Fe city	5,603	6,185
Silver City	2,735	2,102
NEW YORK.		
Albany city	94,151	94,923
Albion village	4,477	4,586
Amsterdam city	20,929	17,336
Auburn city	30,345	25,858
Baldwinsville village	2,992	3,010
Ballston Spa village	3,923	3,527
Batavia village	9,180	7,221
Bath village	4,994	3,261
Bath-on Hudson village	2,504	2,399
Binghamton city	39,647	35,005
Brockport village	3,398	3,742
Buffalo city	352,387	255,664
Canandaigua village	6,151	5,868
Canastota village	3,080	2,774
Canton village	2,757	2,580

NEW YORK—cont.	1900	1890
Carthage village	2,895	2,278
Catskill village	5,484	4,920
Clyde village	2,507	2,638
Cohoes city	23,910	22,509
Corning city	11,061	8,550
Cortland city	9,014	8,590
Coxsackie village	2,735	1,611
Dansville village	3,083	3,758
Depew village	3,379	.....
Dobbs Ferry village	2,888	2,083
Dunkirk city	11,616	9,416
East Syracuse village	2,509	2,231
Ellenville village	2,879	2,881
Elmira city	35,672	30,893
Fishkill Landing village	3,673	3,617
Fort Edward village	3,521	.....
Frankfort village	2,664	2,291
Fredonia village	4,127	3,399
Freeport village	2,612	.....
Fulton village	5,281	4,214
Geneva city	10,433	7,557
Glens Falls village	12,613	9,509
Gloversville city	18,349	13,864
Goshen village	2,826	2,907
Gouverneur village	3,689	3,458
Granville village	2,700	.....
Green Island village	4,770	4,463
Haverstraw village	5,935	5,070
Hempstead village	3,582	4,831
Herkimer village	5,555	.....
Hoosick Falls village	5,671	7,014
Hornellsville city	11,918	10,996
Hudson city	9,528	9,970
Ilion village	5,138	4,057
Ithaca city	13,136	11,079
Jamestown city	22,892	16,038
Johnstown city	10,130	7,768
Kingstown city	24,535	21,261
Lancaster village	3,750	1,692
Lansingburg village	12,595	10,550
Leroy village	3,144	2,743
Lestershire village	3,111	.....
Little Falls city	10,381	8,783
Lockport city	16,581	16,038
Lyons village	4,300	4,475
Malone village	5,935	4,986
Matteawan village	5,807	4,278
Mechanicsville village	4,695	2,679
Medina village	4,716	4,492
Middletown city	14,522	11,977
Mt. Vernon city	21,228	10,830
Newark village	4,578	3,698
Newburg city	24,943	23,087
New Rochelle city	14,720	9,057
New York city	3,437,202	1,515,301
Bronx borough	200,507	.....
Brooklyn borough	1,166,582	.....
Manhattan borough	1,850,093	.....
Queens borough	152,999	.....
Richmond borough	67,021	.....
Niagara Falls city	19,457	.....
North Tarrytown village	4,241	3,179
North Tonawanda city	9,069	4,793
Norwich village	5,766	5,212
Nyack village	4,275	4,111
Ogdensburg city	12,633	11,662
Olean city	9,462	7,358
Oneida village	6,364	6,083
Oneonta village	7,147	6,272

NEW YORK—cont	1900	1890
Ossining village	7,939	9,352
Oswego city	22,199	21,842
Oswego Falls village	2,925	1,821
Owego village	5,039	.....
Patchogue village	2,926	.....
Peekskill village	10,358	9,676
Penn Yan village	4,650	4,254
Perry village	2,763	1,528
Plattsburg village	8,434	7,010
Port Chester village	7,440	5,274
Port Jervis village	9,385	9,327
Potsdam village	3,843	3,961
Poughkeepsie city	24,029	22,206
Rensselaer city	7,466	7,301
Rochester city	162,608	133,896
Rome city	15,343	14,991
Salamanca village	4,251	3,692
Sandy Hill village	4,473	2,895
Saranac Lake village	2,594	768
Saratoga Springs village	12,409	11,975
Saugerties village	3,697	4,237
Schenectady city	31,682	19,902
Seneca Falls village	6,519	6,116
Solvay village	3,493	563
Syracuse city	108,374	88,143
Tarrytown village	4,770	3,562
Tonawanda village	7,421	7,145
Troy city	60,651	60,956
Utica city	56,383	44,007
Walden village	3,147	2,132
Walton village	2,811	2,299
Wappingers Falls village	3,504	3,718
Warsaw village	3,048	3,120
Waterford village	3,146	.....
Waterloo village	4,256	4,350
Watertown city	21,696	14,725
Watervliet city	14,321	12,967
Watkins village	2,943	2,604
Waverly village	4,465	4,123
Wellsville village	3,556	3,435
Whitehall village	4,377	4,434
White Plains village	7,899	4,042
Yonkers city	47,931	32,033
NORTH CAROLINA.		
Asheville city	14,694	10,235
Burlington town	3,692	1,716
Charlotte city	18,091	11,557
Concord city	7,910	4,339
Durham city	6,679	5,485
Edenton town	3,046	2,205
Elizabeth City town	6,348	3,251
Fayetteville town	4,670	4,222
Gastonia town	4,610	1,033
Goldsboro city	5,877	4,017
Greensboro city	10,035	3,317
Greenville town	2,565	1,937
Henderson town	3,746	4,191
Hickory town	2,535	2,023
High Point village	4,163	.....
Kinston town	4,106	1,726
Mt. Airy town	2,680	1,768
Newbern city	9,090	7,843
Raleigh city	13,643	12,678
Reidsville town	3,202	2,969
Rocky Mount town	2,937	816
Salem city	3,642	2,711
Salisbury city	6,277	4,418

CITIES OF TWENTY-FIVE HUNDRED AND OVER

NORTH CAROLINA—cont	1900	1890
Statesville city	3,141	2,318
Washington town	4,842	3,545
Wilmington city	20,976	20,056
Wilson town	3,525	2,126
Winston city	10,008	8,018
NORTH DAKOTA		
Bismarck city	3,319	2,136
Fargo city	9,589	5,664
Grand Forks city	7,652	4,979
Jamestown city	2,853	2,296
OHIO.		
Ada village	2,576	2,079
Akron city	42,728	27,601
Alliance city	8,974	7,607
Ashland village	4,087	3,566
Ashtabula city	12,949	8,338
Athens village	3,066	2,620
Barberton village	4,354	.....
Barnesville village	3,721	3,207
Bellaire city	9,912	9,934
Bellefontaine city	6,649	4,245
Bellevue village	4,101	3,052
Berea village	2,520	2,533
Bowling Green town	5,067	3,467
Bridgeport village	3,963	3,369
Bryan village	3,131	3,068
Bucyrus city	6,560	5,974
Cambridge city	8,241	4,361
Canal Dover village	5,422	3,470
Canton city	30,667	26,189
Carthage village	2,559	2,257
Celina village	2,815	2,702
Chillicothe city	12,976	11,288
Cincinnati city	325,902	296,908
Circleville village	6,991	6,556
Cleveland city	381,768	261,353
Clyde village	2,515	2,327
Collinwood village	3,639	.....
Columbus city	125,560	88,150
Conneaut village	7,133	3,241
Coshocton village	6,473	3,672
Crestline village	3,282	2,911
Cuyahoga Falls village	3,186	2,614
Dayton city	85,333	61,220
Defiance city	7,579	7,694
Delaware city	7,940	8,224
Delphos city	4,517	4,516
Dennison village	3,763	2,925
East Cleveland village	2,757	.....
East Liverpool city	16,485	10,956
Eaton village	3,155	2,934
Elmwood Place village	2,532	.....
Elyria city	8,791	5,611
Findlay city	17,613	18,553
Fostoria city	7,730	7,070
Franklin village	2,724	2,729
Fremont city	8,439	7,141
Galion city	7,282	6,326
Gallipolis city	5,432	4,498
Girard village	2,630	.....
Glenville village	5,588	.....
Greenfield village	3,979	2,460
Greenville city	5,501	5,473
Hamilton city	23,914	17,565
Hicksville village	2,520	2,141

OHIO—cont	1900	1890
Hillsboro village	4,535	3,620
Ironton city	11,868	10,939
Jackson city	4,672	4,320
Kent village	4,541	3,501
Kenton city	6,852	5,557
Lakewood hamlet	3,355	.....
Lancaster city	8,991	7,555
Lebanon village	2,867	3,050
Leetonia village	2,744	2,826
Lima city	21,723	15,981
Lisbon village	3,330	2,278
Lockland village	2,695	2,474
Logan village	3,480	3,119
London village	3,511	3,313
Lorain city	16,028	4,863
Madisonville village	3,140	2,214
Mansfield city	17,640	13,473
Marietta city	13,348	8,273
Marion city	11,862	8,327
Martins Ferry city	7,760	6,250
Marysville village	3,048	2,810
Massillon city	11,944	10,092
Miamisburg city	3,941	2,952
Middleport village	2,799	3,211
Middletown city	9,215	7,681
Mingo Junction village	2,954	1,856
Mt. Vernon city	6,633	6,027
Napoleon village	3,639	2,764
Nelsonville village	5,421	4,558
Newark city	18,157	14,270
Newburg hamlet	5,909	.....
New Comerstown village	2,659	1,251
New Philadelphia city	6,213	4,456
Niles city	7,468	4,289
North Baltimore village	3,561	2,857
Norwalk city	7,074	7,195
Norwood village	6,480	.....
Oberlin village	4,082	4,376
Painesville village	5,024	4,755
Piqua city	12,172	9,090
Pomeroy city	4,639	4,726
Portsmouth city	17,870	12,394
Ravenna village	4,003	3,417
Reading village	3,076	.....
St. Bernard village	3,384	1,779
St. Marys village	5,359	3,000
Salem city	7,582	5,780
Sandusky city	19,664	18,471
Shawnee village	2,966	3,266
Shelby village	4,685	1,977
Sidney city	5,688	4,850
Springfield city	38,253	31,895
Steubenville city	14,349	13,394
Tiffin city	10,989	10,801
Toledo city	131,822	81,434
Toronto village	3,526	2,536
Troy city	5,881	4,494
Uhrichsville city	4,582	3,842
Upper Sandusky village	3,855	3,572
Urbana city	6,808	6,510
Van Wert city	6,422	5,512
Wapakoneta village	3,915	3,616
Warren city	8,529	5,973
Washington Court House	5,751	5,742
Wellston city	8,045	4,377
Wellsville city	6,146	5,247
Wilmington city	3,613	3,079
Wooster city	6,063	5,901
Xenia city	8,696	7,301

OHIO—cont	1900	1890
Youngstown city	44,885	33,220
Zanesville city	23,538	21,009
OKLAHOMA.		
Elreno city	3,383	285
Enid city	3,444	.....
Guthrie city	10,006	5,333
Oklahoma City	10,037	4,151
Perry city	3,351	.....
Ponca city	2,528	.....
Shawnee city	3,462	.....
OREGON.		
Albany city	3,149	3,079
Ashland city	2,634	1,784
Astoria city	8,381	6,184
Baker City	6,663	2,604
Eugene city	3,236	.....
La Grande city	2,991	2,583
Oregon City	3,494	3,062
Pendleton town	4,406	2,506
Portland city	90,426	46,385
Salem city	4,258	.....
The Dalles city	3,542	3,029
PENNSYLVANIA.		
Allegheny city	129,896	105,287
Allentown city	35,416	25,228
Altoona city	38,973	30,337
Apollo borough	2,924	2,156
Archbald borough	5,396	4,032
Ashland borough	6,438	7,346
Ashley borough	4,046	3,192
Athens borough	3,749	3,274
Avoca borough	3,487	3,031
Bangor borough	4,106	2,509
Beaver Falls borough	10,054	9,735
Bellefonte borough	4,216	3,946
Bellevue borough	3,416	1,418
Berwick borough (Columbia county)	3,916	2,701
Bethlehem borough	7,293	6,762
Blairsville borough	3,386	3,126
Blakely borough	3,915	2,452
Bloomsburg town	6,170	4,635
Braddock borough	15,654	8,561
Bradford city	15,029	10,514
Bridgeport borough (Montgomery county)	3,097	2,651
Bristol borough	7,104	6,553
Butler borough	10,853	8,734
Canonsburg borough	2,714	2,113
Carbondale city	13,536	10,833
Carlisle borough	9,626	7,620
Carnegie borough	7,330	.....
Catasauqua borough	3,963	3,704
Chambersburg boroug	8,864	7,863
Charleroi borough	5,930	.....
Chester city	33,988	20,226
Clearfield borough	5,081	2,248
Coatesville borough	5,721	3,680
Columbia borough	12,316	10,599
Connellsville borough	7,160	5,629
Conshohocken boroug	5,762	5,470
Coraopolis borough	2,555	962
Corry city	5,369	5,677

PENNSYLVANIA—cont	1900	1890
Coudersport borough	3,217	1,530
Danville borough	8,042	7,998
Darby borough	3,429	2,972
Dickson borough	4,948	3,110
Doylestown borough	3,034	2,519
Dubois borough	9,375	6,149
Dunmore borough	12,583	8,315
Duquesne borough	9,036	.....
East Mauch Chunk boro	3,458	2,772
Easton city	25,238	14,481
East Pittsburg borough	2,883	.....
East Stroudsburg boro	2,648	1,819
Edwardsville borough	5,165	3,284
Elliott borough	3,345	.....
Erie city	52,733	40,634
Etna borough	5,384	3,767
Ford City borough	2,870	1,255
Forest City borough	4,279	2,319
Frackville borough	2,594	2,520
Franklin city (Venango)	7,317	6,221
Freeland borough	5,254	1,730
Gallitzin borough	2,759	2,392
Gettysburg borough	3,495	3,221
Gilberton borough	4,373	3,687
Girardville borough	3,666	3,584
Greensburg borough	6,508	4,202
Greenville borough	4,814	3,674
Hanover borough	5,502	3,746
Harrisburg city	50,167	39,385
Hazelton city	14,230	11,872
Hollidaysburg boro	2,998	2,975
Homestead borough	12,554	7,911
Honesdale borough	2,864	2,816
Huntingdon borough	6,053	5,729
Indiana borough	4,142	1,963
Jeannette borough	5,865	3,296
Jermyn borough	2,567	2,650
Jersey Shore borough	3,070	1,853
Johnsonburg borough	3,894	1,280
Johnstown city	35,936	21,805
Kane borough	5,296	2,944
Kingston borough	3,846	2,381
Kittanning borough	3,902	3,095
Knoxville borough (Allegheny county)	3,511	1,723
Lancaster city	41,459	32,011
Lansdale borough	2,754	1,858
Lansdowne borough	2,630	875
Lansford borough	4,888	4,004
Latrobe borough	4,614	3,589
Lebanon city	17,628	14,664
Lehighton borough	4,629	2,959
Lewisburg borough	3,457	3,248
Lewistown borough	4,451	3,273
Lock Haven city	7,210	7,358
Luzerne borough	3,817	2,398
Lykens borough	2,762	2,450
McKeesport city	34,227	20,741
McKees Rocks borough	6,352	1,687
Mahanoy City borough	13,504	11,286
Mauch Chunk borough	4,029	3,101
Meadville city	10,291	9,520
Mechanicsburg borough (Cumberland county)	3,841	3,691
Media borough	3,075	2,736
Meyersdale borough	3,024	1,847
Middletown borough	5,608	5,080
Millvale borough	6,736	3,809
Milton borough	6,175	5,317

CITIES OF TWENTY-FIVE HUNDRED AND OVER

PENNSYLVANIA—cont	1900	1890
Minersville borough	4,815	3,504
Monongahela city	5,173	4,096
Mt. Carmel borough	13,179	8,254
Mt. Pleasant borough	4,745	3,652
Nanticoke borough	12,116	10,044
New Brighton borough	6,820	5,616
Newcastle city	28,339	11,600
New Kensington boro	4,665	.....
Norristown borough	22,265	19,791
North Braddock boro	6,535	.....
Northumberland boro	2,748	2,744
Oil City	13,264	10,932
Old Forge borough	5,630	.....
Olyphant borough	6,180	4,083
Parsons borough	2,529	2,412
Patton borough	2,651	.....
Pen Argyl borough	2,784	2,108
Philadelphia city	1,293,697	1,046,964
Philipsburg borough	3,266	3,245
Phoenixville borough	9,196	8,514
Pitcairn borough	2,601	.....
Pittsburg city	321,616	238,617
Pittston city	12,556	10,302
Plymouth borough	13,649	9,344
Pottstown borough	13,696	13,285
Pottsville borough	15,710	14,117
Punxsutawney boro	4,375	2,792
Quakertown borough	3,014	2,169
Rankin borough	3,775	.....
Reading city	78,961	58,661
Renovo borough	4,082	4,154
Reynoldsville borough	3,435	2,789
Ridgway borough	3,515	1,903
Rochester borough	4,688	3,649
Royersford borough	2,607	1,815
St. Clair borough	4,638	3,680
St. Marys borough	4,295	1,745
Sayre borough	5,243	.....
Schuylkill Haven boro	3,654	3,088
Scottdale borough	4,261	2,603
Scranton city	102,026	75,215
Sewickley borough	3,568	2,776
Shamokin borough	18,202	14,403
Sharon borough	8,916	7,459
Sharpsburg borough	6,842	4,898
Sharpsville borough	2,970	2,330
Shenandoah borough	20,321	15,944
Sheraden borough	2,948	.....
Shippensburg borough	3,228	2,188
Slatington borough	3,773	2,716
South Bethlehem boro (Northampton county)	13,241	10,302
South Fork borough	2,635	1,295
South Williamsport boro	3,328	2,900
Spring City borough	2,566	1,797
Steelton borough	12,086	9,250
Stroudsburg borough	3,450	2,419
Summit Hill borough	2,986	2,816
Sunbury borough	9,810	5,930
Susquehanna borough	3,813	3,872
Tamaqua borough	7,267	6,054
Tarentum borough	5,472	4,627
Taylor borough	4,215	.....
Titusville city	8,244	8,073
Towanda borough	4,663	4,169
Turtle Creek borough	3,262	.....
Tyrone borough	5,847	4,705
Union City borough	3,104	2,261
Uniontown borough (Fayette county)	7,344	6,359
Warren borough	8,043	4,332
Washington borough (Washington county)	7,670	7,063
Waynesboro borough	5,396	3,811
Waynesburg borough	2,544	2,101
Wellsboro borough	2,954	2,961
West Bethlehem boro	3,465	2,759
West Chester borough	9,524	8,028
West Hazelton borough	2,516	931
West Pittston borough	5,846	3,906
West Washington boro	2,693	.....
Wilkesbarre city	51,721	37,718
Wilkinsburg borough	11,886	4,662
Williamsport city	28,757	27,132
Williamstown borough	2,934	2,324
Wilmerding borough	4,179	419
Winton borough	3,425	1,797
York city	33,708	20,793
RHODE ISLAND.		
Bristol town	6,901	5,478
Burrillville town	6,317	5,492
Central Falls city	18,167	.....
Coventry town	5,279	5,068
Cranston town	13,343	8,099
Cumberland town	8,925	8,090
East Greenwich town	2,775	3,127
East Providence town	12,138	8,422
Hopkinton town	2,602	2,864
Johnston town	4,305	9,778
Lincoln town	8,937	20,355
Newport city	22,034	19,457
North Kingstown town	4,194	4,193
North Providence town	3,016	2,084
Pawtucket city	39,231	27,633
Providence city	175,597	132,146
Scituate town	3,361	3,174
South Kingstown town	4,972	4,823
Tiverton town	2,977	2,837
Warren town	5,108	4,489
Warwick town	21,316	17,761
Westerly town	7,541	6,813
Woonsocket city	28,204	20,830
SOUTH CAROLINA.		
Abbeville town	3,766	1,696
Aiken town	3,414	2,362
Anderson city	5,498	3,018
Beaufort town	4,110	3,587
Charleston city	55,807	54,955
Chester town	4,075	2,703
Columbia city	21,108	15,353
Darlington town	3,028	2,389
Florence city	4,647	3,395
Gaffney city	3,937	1,631
Georgetown city	4,138	2,895
Greenville city	11,860	8,607
Greenwood town	4,824	1,326
Laurens town	4,029	2,245
Newberry town	4,607	3,020
Orangeburg city	4,455	2,964
Rock Hill city	5,485	2,744
Spartanburg city	11,395	5,544
Sumter city	5,673	3,865
Union town	5,400	1,609

SOUTH DAKOTA	1900	1890
Aberdeen city	4,087	3,182
Deadwood city	3,498	2,366
Huron city	2,793	3,038
Lead city	6,210	2,581
Madison city	2,550	1,736
Mitchell city	4,055	2,217
Sioux Falls city	10,266	10,177
Watertown city	3,352	2,672
Yankton city	4,125	3,670
TENNESSEE.		
Bristol town	5,271	3,324
Brownsville city	2,645	2,516
Chattanooga city	30,154	29,100
Clarksville city	9,431	7,924
Cleveland town	3,858	2,863
Columbia town	6,052	5,370
Covington town	2,787	1,067
Dyersburg city	3,647	2,009
Fayetteville town	2,708	2,410
Harriman town	3,442	716
Humboldt town	2,866	1,837
Jackson city	14,511	10,039
Johnson City town	4,645	4,161
Knoxville city	32,637	22,535
Memphis city	102,320	64,495
Morristown town	2,973	1,999
Murfreesboro city	3,999	3,739
Nashville city	80,865	76,168
Pulaski town	2,838	2,274
Rockwood town	2,899	2,305
Tullahoma town	2,684	2,439
Union City town	3,407	3,441
TEXAS.		
Abilene city	3,411	3,194
Austin city	22,258	14,575
Beaumont city	9,427	3,296
Belton city	3,700	3,000
Bonham town	5,042	3,361
Bowie town	2,600	1,486
Brenham city	5,968	5,209
Brownsville city	6,305	6,134
Brownwood city	3,965	2,176
Bryan city	3,589	2,979
Calvert town	3,322	2,632
Cameron city	3,341	1,608
Cleburne town	7,493	3,278
Corpus Christi city	4,703	4,387
Corsicana city	9,313	6,285
Crockett town	2,612	1,445
Cuero town	3,422	2,442
Dallas city	42,638	38,067
Denison city	11,807	10,958
Denton city	4,187	2,558
El Paso city	15,906	10,338
Ennis city	4,919	2,171
Fort Worth city	26,688	23,076
Gainesville city	7,874	6,594
Galveston city	37,789	29,084
Georgetown town	2,790	2,447
Gonzales city	4,297	1,641
Greenville town	6,860	4,330
Hillsboro city	5,346	2,541
Houston city	44,633	27,557
Jefferson city	2,850	3,072

TEXAS—cont.	1900	1890
Laredo city	13,429	11,319
Longview town	3,591	2,034
McKinney city	4,342	2,489
Marlin town	3,092	2,058
Marshall city	7,855	7,207
Navasota town	3,857	2,997
Oak Cliff town	3,630	2,470
Orange city	3,835	3,173
Palestine city	8,297	5,838
Paris city	9,358	8,254
Rockdale city	2,615	1,505
San Antonio city	53,321	37,673
Sherman city	10,243	7,335
Smithville town	2,577	616
Sulphur Springs town	3,635	3,038
Taylor town	4,211	2,584
Temple city	7,065	4,017
Terrell city	6,330	2,988
Texarkana city	5,256	2,852
Tyler town	8,069	6,908
Victoria city	4,010	3,046
Waco city	20,686	14,445
Waxahachie town	4,215	3,076
Weatherford city	4,786	3,369
Yoakum town	3,499	1,745
UTAH.		
American Fork city	2,732	.....
Brigham city	2,859	2,139
Eureka city	3,085	1,733
Lehi City	2,719	.....
Logan city	5,451	4,565
Ogden city	16,313	14,889
Park City	3,759	2,850
Payson city	2,636	2,135
Provo City	6,185	5,159
Salt Lake City	53,531	44,843
Spanish Fork city	2,735	2,214
Springville city	3,422	2,849
VERMONT.		
Barre city	8,448	4,146
Barre town	3,346	2,666
Barton town	2,790	2,217
Bellows Falls village	4,337	3,092
Bennington village	5,656	3,971
Brandon town	2,759	3,310
Brattleboro village	5,297	5,467
Burlington city	18,640	14,590
Derby town	3,274	2,900
Fair Haven town	2,999	2,791
Hartford town	3,817	3,740
Lyndon town	2,956	2,619
Middlebury town	3,045	2,793
Montpelier city	6,266	4,160
Morristown town	2,583	2,411
Newport town	3,113	3,047
Northfield town	2,855	2,628
Poultney town	3,108	3,031
Randolph town	3,141	3,232
Rutland city	11,499	.....
St. Albans city	6,239	.....
St. Johnsbury village	5,666	3,857
Springfield town	3,432	2,881
Swanton town	3,745	3,231
Waterbury town	2,810	2,232
West Rutland town	2,914	3,680

CITIES OF TWENTY-FIVE HUNDRED AND OVER

VERMONT.	1900	1890
Winooski village	3,783	3,659
Woodstock town	2,557	2,545
VIRGINIA.		
Alexandria city	14,528	14,339
Berkley town	4,988	3,899
Bristol city	4,579	2,902
Charlottesville city	6,449	5,591
Clifton Forge town	3,212	1,792
Covington town	2,950	704
Danville city	16,520	10,305
Fredericksburg city	5,068	4,528
Hampton town	2,764	2,513
Harrisonburg town	3,521	2,792
Lexington town	3,203	3,059
Lynchburg city	18,891	19,709
Manchester city	9,715	9,246
Newport News city	19,635	4,449
Norfolk city	46,624	34,871
Petersburg city	21,810	22,680
Pocahontas town	2,789	2,953
Portsmouth city	17,427	13,268
Pulaski town	2,813	2,112
Radford city	3,344	2,060
Richmond city	85,050	81,388
Roanoke city	21,495	16,159
Salem town	3,412	3,279
Staunton city	7,289	6,975
Suffolk town	3,827	3,354
Winchester city	5,161	5,196
Wytheville town	3,003	2,570
WASHINGTON.		
Aberdeen town	3,747	1,638
Ballard city	4,568	1,173
Everett city	7,838	.....
Fairhaven city	4,228	4,076
Hoquiam city	2,608	1,302
New Whatcom city	6,834	4,827
North Yakima city	3,154	1,535
Olympia city	3,863	4,698
Port Townsend city	3,443	4,558
Roslyn town	2,786	1,484
Seattle city	80,671	42,837
Spokane city	36,848	19,922
Tacoma city	37,714	36,006
Vancouver city	3,126	3,545
Wallawalla city	10,049	4,709
WEST VIRGINIA		
Benwood city	4,511	2,934
Bluefield city	4,644	1,775
Charleston city	11,099	6,742
Clarksburg town	4,050	3,008
Fairmont city	5,655	1,023
Grafton city	5,650	3,159
Hinton city	3,763	2,570
Huntington city	11,923	10,108
Keyser town	2,536	2,165
Martinsburg town	7,564	7,226
Moundsville city	5,362	2,688
Parkersburg city	11,703	8,408
Sistersville city	2,979	469
Wellsburg city	2,588	2,235
Weston town	2,560	2,143
Wheeling city	38,878	34,522

WISCONSIN.	1900	1890
Antigo city	5,145	4,424
Appleton city	15,085	11,869
Ashland city	13,074	9,956
Baraboo city	5,751	4,605
Beaverdam city	5,128	4,222
Beloit city	10,436	6,315
Berlin city	4,489	4,149
Burlington city	2,526	2,043
Chippewa Falls city	8,094	8,670
Depere city	4,038	3,625
Eau Claire city	17,517	17,415
Fond du Lac city	15,110	12,024
Fort Atkinson city	3,043	2,283
Grand Rapids city	4,493	1,702
Green Bay city	18,684	9,069
Hudson city	3,259	2,885
Janesville city	13,185	10,836
Jefferson city	2,584	2,287
Kaukauna city	5,115	4,667
Kenosha city	11,606	6,532
La Crosse city	28,895	25,090
Lake Geneva city	2,585	2,297
Madison city	19,164	13,426
Manitowoc city	11,786	7,710
Marinette city	16,195	11,523
Marshfield city	5,240	3,450
Menasha city	5,589	4,581
Menominee city	5,655	5,491
Merrill city	8,537	6,809
Milwaukee city	285,315	204,468
Mineral Point city	2,991	2,694
Monroe city	3,927	3,768
Neenah city	5,954	5,083
New London city	2,742	2,050
Oconomowoc city	2,880	2,729
Oconto city	5,646	5,219
Oshkosh city	28,284	22,836
Platteville city	3,340	2,740
Portage city	5,459	5,143
Port Washington city	3,010	1,659
Prairie du Chien city	3,232	3,131
Racine city	29,102	21,014
Rhinelander city	4,998	2,658
Rice Lake city	3,002	2,130
Ripon city	3,818	3,358
Sheboygan city	22,962	16,359
South Milwaukee city	3,392	.....
Sparta city	3,555	2,795
Stevens Point city	9,524	7,896
Stoughton city	3,431	2,470
Sturgeon Bay city	3,372	2,195
Superior city	31,091	11,983
Tomah city	2,840	2,199
Two Rivers city	3,784	2,870
Watertown city	8,437	8,755
Waukesha city	7,419	6,321
Waupaca city	2,912	2,127
Waupun city	3,185	2,757
Wausau city	12,354	9,253
Wauwatosa city	2,842	.....
Whitewater city	3,405	4,359
WYOMING.		
Cheyenne city	14,087	11,690
Laramie city	8,207	6,388
Rock Springs city	4,363	3,406

A FEW TEST AND REVIEW QUESTIONS

The following series of questions will tend to fix in the mind of the reader much of the valuable information contained within the pages of this book.

All of the subject matter of the book is not covered by the questions, nor indeed could it be without greatly enlarging the size of the volume, for its pages literally teem with important facts and figures of the most practical value, not only to the business man, but to the student, teacher, farmer, mechanic, lawyer, and statesman.

To those who have not familiarized themselves with the contents of the book, this partial list of questions will serve to show what a valuable aid this compact little ready-reference manual must be in solving the many puzzling problems that are constantly presenting themselves for solution in the practical every day business life of busy people.

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BUSINESS DICTIONARY.

A

Abandonment.—In marine insurance, the giving up of property partly destroyed, by the owner to the insurer.

Abatement.—A discount allowed for damage or overcharge, or for the payment of a bill before it is due.

Abolish.—To make void; to cancel.

Acceptance.—In mercantile law, the act by which the person upon whom a bill of exchange or other order is drawn engages to pay it: the bill itself after it has been accepted.

Acceptance for Honor.—An acceptance made after a bill has been protested for non-acceptance for the honor of the drawer or any indorser.

Acceptor.—One who accepts an order or draft or bill of exchange.

Accommodation Paper.—Commercial paper for which no consideration passed between the original parties: also a note to which a party has put his name to accommodate another who is to provide payment when due.

Acknowledgment.—The act by which a party who has executed an instrument declares or acknowledges it before a competent officer to be his or her act and deed.

Account.—A written or printed statement of debits and credits in any business transaction.

Account Current.—A detailed statement of the transactions between parties for a certain period, showing the condition of affairs at the *current* or present time.

Account Sales.—A detailed statement of a commission merchant to his principal, showing his sales, the expenses attending the same and the *net proceeds*.

Accountant.—A person trained to keep accounts.

Actionaire.—The owner of shares in a stock company; a stockholder.

Action.—The formal means of recovering one's rights in a court of justice; a suit.

Act of God.—Any accident produced by a physical cause which is irresistible, such as lightning, hurricanes, earthquakes, etc.

Actuary.—A registrar or clerk; generally applied to the manager of a life insurance company.

Administrator.—A person appointed to settle the estate of a testator or to manage an intestate estate.

Admiralty.—The power that controls naval affairs in Great Britain. Court of Admiralty—A court which decides questions of maritime justice.

Adulteration.—The debasing of an article or substance by spurious or less valuable mixture.

Ad valorem.—According to value.

Advance.—A rise in price: additional profits; stocks above par.

Adventure.—Goods sent to sea at the owner's risk; a speculation.

Adventure in Co.—Goods sent to be sold on joint account of shippers and consignee.

Advice.—Admonition or suggestions offered, usually in regard to buying and selling goods.

Affida it.—A written statement made upon oath.

Affreight.—To hire, as a ship, for transporting freight.

Affreightment.—The hiring of a ship for the conveyance of goods.

Agency.—The relation existing between two parties by which one is authorized to do certain business for another, with other parties

Agent.—Any person who is employed by another to do business or in any way act for him.

Age of Consent.—The age at which young persons are capable of making a valid contract of marriage.

Agio.—A term used to denote the difference between the real and nominal value of money.

Alimony.—An allowance made to a wife out of her husband's estate during a suit for divorce or separation, or, at its termination, for her life or for a shorter period

Allonge.—A paper attached to a bill of exchange, when there are too many indorsements to be contained on the bill itself.

Amotion. Removal of an officer of a corporation.

Allowance.—A deduction made, for instance, from the gross weight of goods.

Anker.—A common liquid measure, varying in different European countries from nine to ten gallons.

Antal.—A wine measure of Hungary, holding about thirteen and a half gallons.

Anticipate.—To be before in doing, or pay before due.

Ante-dated.—Dated at a time earlier than the actual date.

Annulment.—The act of making void.

Appraise.—To set a value on goods or property.

Appurtenance.—Adjunct of appendage to property.

Arbitration.—The investigation and decision of a cause or matter between parties in controversy, by chosen persons.

Arbitration of Exchange.—The deduction of a proportional or arbitrated rate of exchange between two places, through an intermediate place, to ascertain the most advantageous method of drawing or remitting.

Arrear.—That which remains unpaid, though due.

Articles of Copartnership.—The written agreement by which a copartnership is formed.

Assay.—To subject an ore to chemical examination to find the amount of any metal contained in it.

Assess.—To fix a certain value for the purpose of taxation.

Assets.—Property available for the payment of debts; also the entire property of an individual or company.

Assignee.—The person to whom the failing debtor transfers all his remaining property for the purpose of having it distributed among his creditors; one to whom anything is assigned.

Assignment.—A transfer of a failing debtor of his property to an assignee; a transfer by one person to another of any property, personal or real.

Assignor.—One who assigns property.

Association.—The union of a number of persons for some special purpose.

Attachment.—A seizure by virtue of a legal process.

Attorney (Power of).—A written authority from one person empowering another to act for him.

Auctioneer.—One who sells goods at public sale.

Auditor.—A person appointed to examine and settle accounts.

Avails. Profits of property disposed of; proceeds of goods sold.

Average.—A proportional share of a general loss; also a mean time of payment for several debts due at different times.

Avoirdupois.—Commercial standard of weight in the United States and England.

Award.—Decision of arbitrators.

B

Bail.—The security given for releasing a person from custody.

Bailee.—The person to whom goods are intrusted.

Bailment.—A delivery of goods in trust upon a contract that the trust shall be faithfully executed on the part of the bailee.

Bailor.—One who intrusts goods to another.

Balance.—The excess on one side, or what added to the other makes equality in the account.

Balance Sheet.—A statement in condensed form showing the condition and progress of business.

Ballast.—Any heavy material placed in the hold of a ship to steady it in the water.

Banco.—A commercial term used in Hamburg to distinguish bank money from common currency.

Bank Bill.—A written promise to pay to the bearer on demand a certain sum of money, issued by a bank and used as money.

Banking.—The business of a banker, or pertaining to a bank.

Bank Note.—Same as bank bill.

Bankrupt.—An insolvent; one who is unable to pay his debts.

Bankruptcy.—The condition of one who is unable to pay his debts as they fall due.

Bank Stock.—Shares in the capital stock of a bank.

Barratry.—Any breach of duty committed by the master of a vessel or the seamen, without the consent of the owner, by reason of which the ship or cargo is injured

Barque.—A three masted vessel carrying no square sails on her mizzen mast.

Barter.—To trade by exchange of goods, in distinction from trading by the use of money.

Bazaar.—A word of Eastern usage, signifying a place of exchange, or general market place; a repository of fancy articles, especially of dress.

Beacon.—A signal light for the guidance of mariners; usually erected and sustained by the Government.

Beneficiary.—In life insurance, the person to whom a policy is made payable; the person for whose benefit another holds the legal title to real estate.

Beyond Seas.—Denotes absence from the country, and generally held to mean absence from the particular State.

Bidder.—One who bids or offers a price.

Bill.—A name given to statements in writing; as goods, a note, a draft; a law not enacted; exhibition of charges.

Bill of Exchange.—A direction in writing, by the person who signs it, to another, to whom it is addressed, to pay to a third person a definite sum of money at a specified time.

Bill of Lading.—A written statement by a common carrier to one sending goods by him, acknowledging that they have been received by him, for transportation, with terms of shipment; it is both a receipt and a contract.

Bill of Parcels.—A detailed account of goods sold.

Bill of Sale.—A formal instrument for the transfer of goods and chattels.

Blank Indorsement.—One in which no particular person is named as the one to whom payment is to be made: it consists of the indorser's name only.

Board of Trade.—An association of business men for the advancement of commercial interests.

Bona Fide.—In good faith; in reality.

Bond.—A written and sealed instrument binding a person and, in more cases, his heirs to fulfill certain obligations.

Bonded Goods.—Goods in charge of the officers of customs the duties on which bonds are given at the custom house.

Bonus.—A premium or extra sum for a loan, a charter, or other privilege.

Book-Debt.—An entry or charge on a ledger; called also an open account, in contradistinction to a written promise or note.

Bottomry Bond.—An obligation given for a loan upon a vessel and accruing freight.

Breach.—In the law of contracts, the violation of an agreement or obligation.

Breakage.—An allowance made by the shipper or seller on certain descriptions of fragile goods.

Broker.—A person who transacts business for another, commonly in stock, money, etc., using the name of his principal.

Brokerage.—The fee charged for transacting business by a broker.

Bulls and Bears.—Persons engaged in the gambling transactions of stock exchange; the bulls are personally interested in *tossing up* the prices of certain goods, while the bears are fighting to pull down prices.

Bullion.—A commercial name for uncoined gold or silver.

By-Bidder.—A person employed at auctions, in order to raise the price of articles to be sold.

By-Laws.—The private laws made by a corporation for its own government.

C

Capital.—The stock employed in trade; the fruit of past labors saved.

Capital Stock.—The fund or property, as a whole, contributed, or supposed to have been contributed, to a corporation at its organization, as its property.

Carat.—An imaginary weight that expresses the fineness of gold.

Cargo.—A ship's lading or freight.

Cashier.—One who has charge of money and superintends the receipts of payments.

Caveat Emptor.—A Latin phrase, meaning, "let the purchaser beware," and applies to a case in which the thing sold is before the buyer and he examines it.

Centage.—A rate by the hundred.

Certified Check.—A check which has been certified by the bank on which it is drawn, making the bank absolutely responsible for its payment.

Certificate.—A certificate issued by a bank or banker, showing that a certain sum of money has been deposited there, payable to a certain person, or to his order, or to the bearer.

Certificate of Stock.—A certificate given by the proper officers of a corporation, showing that a certain person owns a certain number of shares of the capital stock.

Certification (of check).—The signature of the proper officer of the bank, written across the face of the check, sometimes with and sometimes without the word "certified" or "good."

Chancellor.—The chief judge of a court of chancery or equity.

Charter.—An instrument in writing from the sovereign power or legislature, conferring certain rights or privileges.

Charter Party.—The written instrument by which the owner of a vessel lets it, or a part of it, to another.

Chattel Mortgage.—A conditional sale of personal property, one which is to become void if a certain thing happens; chiefly used as the security for the payment of money.

Chattels.—Commonly means goods of any kind, or every species of personal property.

Check.—A written order for money drawn upon a bank or banker, and payable immediately.

Choses in Action.—Things of which the owner has not possession, but merely the act of legal action or possession, as notes, accounts, etc.

Choses in Possession.—Things in possession of the owner; circulating medium—cash and bank notes payable on demand; the medium of exchange.

Civil Law.—The system of law of ancient Rome.

Civil Remedy.—The method of redressing an injury inflicted by one person upon another by legal measures.

Clearance.—Permission from a custom house officer for a ship to sail.

Clearing House.—A kind of banking exchange for the convenience of daily settlements between banks.

Clerical Error.—An error in calculating or other accidental error on books or documents.

Collateral.—Property pledged as security for the performance of a contract.

Commerce.—The exchange of merchandise on a large scale.

Commercial Paper.—Bills of exchange, drafts or promissory notes given in the course of trade.

Common Carrier.—One who, as a business, undertakes for hire to transport from place to place passengers or goods of all who choose to employ him.

Coasting.—Sailing near land, or vessels trading between parts of the same country.

Codicil.—A supplement to a will.

Common Law.—The unwritten law, as distinguished from written or statute law; the old law of England, that derives its force from long usage and custom.

Commission.—The brokerage or allowance made to an agent or factor for doing business for another.

Competency.—The legal fitness of a witness to give evidence on the trial of an action.

Composition Deed.—An agreement between an insolvent debtor and his creditors by which, upon payment to each of some fixed proportion of his claim, they all agree to release the debtor from the balance of their claims.

Compromise.—An agreement between a debtor and his creditors by which they agree to accept a certain proportion of the amounts due, and discharge him from the remainder.

Concurrent.—Existing together: a consideration is concurrent when the acts of the parties are to be performed at the same time.

Condition Precedent.—An act which must be performed by one person before another is liable, or in order to make him liable.

Cooperage.—Charges for putting hoops on casks or bales.

Consideration.—The reason for inducement in a contract upon which the parties consent to be bound.

Consignee.—One to whom merchandise, given to a carrier by another person for transportation, is directed.

Consignor.—One who gives merchandise to a carrier for transportation to another.

Compact. A covenant or contract between different parties.

Company.—A number joined together to undertake some common enterprise.

Compound.—To adjust by agreement differently from the original terms; to settle by compromise.

Compromise.—A friendly settlement of differences by mutual concessions.

Consignment.—The act of consigning, as charge for safe-keeping, and management, as goods, property, etc.

Consul. A person commissioned to reside in a foreign country as an agent of the Government.

Contraband.—Prohibited merchandise or traffic.

Contract.—To make an agreement; to covenant.

Conveyance.—The act of carrying by land or water; the means of conveyance; a written instrument by which an estate in lands is transferred from one to another.

Copartnership.—A joint interest in business.

Corporation.—An artificial person created by law, consisting of one or more natural persons, united in one body, and endowed with the capacity of perpetual succession, and of acting in certain respects as a natural person.

Counter-Claim.—Same as *set-off*; one debt or claim to set off another

Counterfeit.—To copy or imitate without authority, with a view to defraud; a forgery.

Countersign.—To sign in addition to the name of a superior that of the secretary or subordinate officer, as bank notes are signed by the president and countersigned by the cashier.

Coupon.—An interest warrant printed at the ends of bonds, to be cut off when the interest is paid.
Course of Exchange.—The current price of bills of exchange between two places.
Covenant.—Any compromise contained in a sealed instrument.
Covenantee.—The person to whom the promise is made.
Coverture.—The legal state and condition of a married woman, being considered as under the shelter and protection of her husband.
Credentials.—Testimonials or certificates showing that a person is entitled to credit, authority or official powers.
Credit.—Trust given or received; mercantile reputation entitling one to be trusted; also the side of an account on which payment is entered.
Credito .—One to whom money is due.
Curb-stone Brokers.—A term applied to a class of stock operators in New York who do business on the sidewalk or pavement.
Currency.—That which circulates as a representative of value.
Customs.—Customary toll, tax, or tribute on imported or exported goods.
Custom House.—A building where duties are paid and vessels entered and cleared.

D

Damages.—A compensation, usually in money, to one party for a wrong done him by another.
Days of Grace.—Days (usually three) allowed by custom for the payment of bills and notes beyond the day expressed for payment on the face of them.
Debase.—To lessen in value by adulteration.
Debenture.—A certificate given by the collector of a port of entry to an importer for drawback of duties on imported merchandise, which, when the merchandise is exported, are to be refunded.
Debit.—A recorded item of debt, also the debtor side of an account.
Debt.—That which is due from one person to another
Debtor.—The person who owes another, either money, goods or services.
Deed.—A sealed instrument in writing used to transfer property, usually real estate.
Default.—Omission, neglect or failure.
Defaulter.—One who fails to discharge a public duty, as to account for money intrusted to him.
Defalcation.—A diminution; deficit.
Defense.—The answer made by the defendant to the plaintiff's action, by demurrer or plea at law
Del Credere.—A commercial term implying a guarantee of the solvency of the purchaser,
Delivery.—Giving money or goods to another.
Demand.—A peremptory urging of payment of a claim and exaction.
Demise. To convey, to bequeath by will.
Demurrage.—Allowance for detention of a ship.
Deposit.—A delivery of goods to be kept and returned without recompense.
Depository.—A trustee, one to whom something is committed for safekeeping; also the place where such deposited goods are kept in store.
Deputy.—One appointed to act for another; a representative or delegate.
Diplomacy.—The science of conducting negotiations between nations.
Deviation.—In the law of marine insurance, a voluntary departure without necessity from the regular course of the specific voyage insured.
Discount.—An allowance or deduction made for the payment of money before it is due.
Discount Days.—The days of the week on which the directors of a bank meet to consider paper offered for discount.
Disability.—Want of qualification; incapacity to do a legal act.
Disaffirmance.—The annulling or canceling of a voidable contract.
Disfranchisement.—Expulsion of a member from a corporation.
Dishonor.—The non-payment of negotiable paper when due.
Distress.—The taking of personal property to enforce the payment of something due, as rent,
Divorce.—The separation of husband and wife by the sentence of law.
Dividend.—A percentage of profits paid to stockholders.
Domestic Relation.—The relations of the members of a household or family,
Donee.—The person to whom a gift or donation is made.
Donor.—One who confers anything gratuitously.
Dormant.—Silent partner, one who takes no share in the active business, but shares profit.

Drawback.—Money paid back on goods exported, a part or the whole of the duty charged.

Draft—An order from one man to another directing the payment of money, a bill of exchange.

Drawee.—The person upon whom a bill of exchange is drawn, who is directed to make the payment.

Drawer.—The person who draws or makes a bill of exchange.

Dress Goods.—A term applied to fabrics for the garments of women and children, usually of mixed materials, such as silk and cotton, silk and worsted, etc.

Due Bill.—A written acknowledgment of debt; not transferable by mere indorsement.

Dun.—To press urgently the payment of a debt.

Duplicate.—A copy or counterpart of anything.

Duress. Personal restraint, or fear of personal injury or of imprisonment; it nullifies all contracts into which it enters.

Duties.—A tax levied by the Government on imported goods; money paid to the Government on imported and exported goods.

E

Earnest.—Something given by the buyer to the seller, to bind the bargain and prove the sale.

Easement.—The right to use another's land.

Effects.—All kinds of personal property.

Ell.—An English measure of length equal to 1¼ yards; the Scotch ell is 1 3-100 yards.

Embargo.—A detention of vessels in port; prohibition from sailing.

Embarrassment.—Perplexity arising from insolvency or temporary inability to discharge debts.

Embassy.—The public business intrusted to diplomatic officers.

Enact.—To make a law or establish by law.

Engrosser.—One who buys large quantities of any goods in order to control the market.

Embezzlement.—To appropriate public money to private use by a breach of trust.

Emporium.—A place of extensive commerce, a market place.

Emblements.—Growing crops of any kind produced by expense or labor.

Eminent Domain.—The right of sovereign power to take private property for public purposes.

Equity of Redemption.—The right which a mortgagor has to redeem his estate after the mortgage has come due.

Endorse.—To endorse a note by writing the name on the back.

Entrepot.—A bonded warehouse; a storehouse for the deposit of goods; a free port.

Equity.—A system supplemental to law, qualifying or correcting it in extreme cases.

Escrow.—A deed or bond delivered by a third party to be held or delivered to the guarantee or creditor upon the performance of some condition.

Estate.—The degree, quantity, nature, or extent of interest which a person has in real property.

Estoppel.—A stop, a bar to one's alleging or denying a fact contrary to his own previous actions, allegation or denial.

Exchange.—Act of bartering; a bill drawn for money; a place where merchants meet; difference between the value in two places, or premium or discount arising from purchase or sale of goods.

Executed (of a contract).—Finished.

Excise.—Taxes or duties on articles produced and consumed at home; internal revenue tax.

Execution.—A written command issued to a sheriff or constable after a judgment directing him to enforce it; the act of signing and sealing a legal instrument, or giving it the form required to make it a valid act.

Executor.—The person appointed by a testator to execute his will.

Executory.—To be executed in the future.

Exports.—That which is carried out of a country, as goods and produce in traffic.

Express.—A courier; also regular and quick conveyance for packages, etc.

F

Face.—The amount expressed on a note or draft.

Factor.—An agent who sells and buys in his own name, being entrusted with the goods, in this respect differing from a broker.

Facture.—An invoice or bill of parcels.

Failure.—Becoming bankrupt, suspension of payment.

Fac-simile.—An exact copy or likeness.

Favor.—A note or draft is said to be in favor of the payee.

Fee Simple.—Full ownership in land.

Feud.—An estate in land held of a superior by service; a fief.
Feudal System.—The system of feuds or fiefs as existing, especially during the middle ages.
Finance.—Revenue, public money, income.
Financier. One skilled in financial operations; a treasurer.
Firm. All the members of a partnership taken together, a business house or company, the title used by a business house.
Firkin.—A measure of capacity; the fourthpart of a barrel, or eight or nine gallons.
Fiscal.—Pertaining to the public treasury or revenue.
Fixtures.—The part of the furniture of a store or office which is not movable, as gas pipes or burners, partitions, etc.
F. O. B.—Free on board; the bill or invoice with F. O. B. includes the transporting to the shipping port and all the shipping expenses.
Foreclose.—To cut off by a court judgment from the power of redeeming mortgaged property.
Foreclosure.—The process of cutting off the right or interest of the mortgager and his assignees in mortgaged premises.
Forestall.—To buy goods on their way to market, intending to sell again at a higher price.
Forfeiture.—A loss of property, right, or office, as a punishment for an illegal act or negligence; sometimes used for the thing forfeited.
Folio.—A page in an account book; sometimes two opposite pages bearing the name serial number.
Franc.—A silver coin used in France equal to about nineteen cents.
Frank.—To exempt from charge of portage.
Fraud.—A cunning deception or artifice to cheat or deceive another.
Free Trade.—The policy of conducting international commerce without duties.
Freehold.—Land held by free tenure, or in fee simple, subject to no superior or conditions.
Freight.—Merchandise being moved from one place to another; the price paid for carrying freight; also a load or burden.
Funded.—Turned into a permanent loan, on which annual interest is paid.
Funds.—The supply of money or the capital.
Forgery.—The fraudulent making or altering of a written instrument.

G

Gain.—Advantage, acquisition, accumulation, profit.
Garbled.—Drugs, spices or other goods which have been sorted or picked over and freed from impurities.
Gauging.—Measuring the capacity of casks, etc.
General Average.—A contribution made by the owners of a vessel and cargo toward the loss sustained by one of their number, whose property has been sacrificed for the general safety.
General Ship.—A vessel navigated by its owner, receiving and carrying freight indifferently for all who apply.
Gist.—The principal point of a question; the pith of the matter.
Go-between.—Agent for both parties.
Goods.—Same as chattels and effects.
Good Will.—Benefit arising from the successful conduct of business by a certain person or firm, usually in a certain place; it is a property subject to transfer.
Grant.—A transfer of a property by deed; a conveyance made by the Government.
Gross.—Twelve dozen.
Gross Weight.—Weight of goods including dust, dross, bag, cask, etc.
Guaranty (or guarantee).—A contract whereby one person engages to be answerable for the debt or default of another person.
Guarantor.—He who makes a guaranty.
Guardian.—One who has the care of the person and property of an orphan or other person.

H

Habeas Corpus.—A writ to bring a party before a court, to prevent false imprisonment.
Haberdasher.—A seller of small wares, as thread, pins, etc.
Hand-book.—A book of reference; a manual.
Hand-money.—Money paid the purchaser at the closing of a contract or sale.
Harbor.—A port or haven for ships.
Haven.—A port or shelter for ships, a harbor
High Seas.—The uninclosed waters of the ocean outside the boundaries of any country.
Hollow Ware.—A trade name for camp and kitchen utensils made of cast-iron or wrought-iron.
Honor.—To accept and pay when due.

Husbandage.—An owner's or an agent's commission for attending to a ship.
Hypothecate.—To pledge for the security of creditor.

I

Infant.—In law, one under the age of twenty-one years.
Impolite.—Wanting in prudent management; not politic.
Import.—To bring in from abroad or a foreign country.
Importer.—The merchant who imports goods.
Imposition.—Tax, toll, duty or excise prescribed by authority.
Impost.—A tax or duty imposed on imported goods.
Indemnify.—To recompense for loss, to reimburse.
Indenture.—A mutual agreement in writing.
Indorsement.—A writing on the back of a note.
Indorser.—The one who makes the indorsement.
Indorsee.—The person in whose favor the indorsement is made.
Injunction.—An order or direction of the court compelling a certain person to refrain from doing some particular act or thing.
Indulgence—Extension of time of payment; forbearing to press for payment.
Inland Bills.—A draft or bills of exchange drawn on a party in the same as the drawer.
Insolvency.—Inability to discharge debts when due.
Insurance.—Indemnity from loss; the premium paid.
Installment.—Payment of parts at different times.
Interest.—Premium paid for the use of money.
Internal Revenue.—The part of the revenue of our Government which is collected in the form of internal duties.
Intestate.—Without a will.
Invalid.—Of no legal force.
Inventory.—A list of merchandise made periodically for the purpose of knowing the quantity and value of unsold goods, in order to ascertain the condition of business.
Investment.—The laying out of money in the purchase of some species of property.
Invoice.—A written account or bill of merchandise bought; a bill of items.

J

Jettison.—Throwing goods overboard in case of peril, to lighten and preserve the ship.
Joint Stock.—Stock held in company; a species of partnership.
Joint Tenancy.—Joint occupancy; not so close intimacy as partnership.
Journal.—A book used to classify and arrange business transactions.
Judgment.—The sentence of the law pronounced by the court upon any matter contained in the record, or in any case tried by the court.
Judgment Debtor.—Party against whom a judgment is obtained.
Judgment Note.—A note in the usual form, with the addition of the power to confess judgment if not paid when due.
Jurisdiction.—The power of exercising judicial authority.

K

Kilogram.—The French measure of weight, equal to 2½ lbs. avordupois, or 1000 grains.
Kiting or Kite Flying.—Exchanging checks on different banks, for the purpose of obtaining the use of money for a single day.

L

Lame Duck.—A stock broker's term for one who fails to meet his engagements.
Landlord.—One who owns and rents or leases lands or houses; a hotelkeeper.
Larceny.—Theft; taking personal property belonging to another.
Law Merchant.—The general body of usages in matters relative to commerce.
Lay Days.—Days allowed for loading and unloading a cargo.
Lay Down.—A phrase used to express the entire cost of a commodity, including transportation, etc., at a place remote from its production or purchase.
Lease.—A contract by which one grants to another for a period the use of certain real estate.
Legal Tender.—That kind of money which by law can be offered in payment of a debt.
Legacy.—A gift by will of personal property.
Ledger.—A book in which a summery of accounts is preserved.
Lessee.—One who takes an estate by a lease.

Letter of Credit.—A letter authorizing credit to a certain amount to be given to the bearer; also a written direction by some well-known banker to someone to draw upon him for any amount he chooses up to a specified limit.

Liability.—Obligations, debts.

Libel.—To defame by public writing, printing, signs, or pictures.

License.—A grant or permission by the authorities.

Lien.—A legal claim on property for debt.

Liquidate.—To clear off; to settle; to pay as debts.

Lloyds.—A marine insurance association in London. The records of this society contain a complete history of the sea, so far as concerns the number of shipwrecks, collisions, fires, piracies, mutinies, etc.

Litigation.—The act of litigating; judicial contest; a suit at law.

Loan.—A thing furnished to another for temporary use, on condition that it be returned.

Long Price.—Price after the duties are paid.

M

Malfeasance.—Evil conduct; illegal deed.

Maintenance.—Support by means of food, clothing and other conveniencies.

Mandate.—A bailment of personal property in which the bailee undertakes without compensation to do some act for the bailor in respect to the thing bailed.

Mandatory.—A person to whom a charge is given or business intrusted.

Manifest.—An invoice of a ship's cargo.

Manufacture.—The process of reducing raw material into a form suitable for use.

Marine—Relating to the ocean; nautical.

Maritime Law.—Law relating to harbors, ships, seamen.

Marc.—A weight of gold and silver, used as a measure of these metals in Europe.

Mart.—A commercial center; a market place.

Maturity.—The date when a note or draft falls due or is payable.

Mercantile Law.—Law pertaining to trade and commerce.

Merchandise.—Whatever is sold or bought in trade.

Merger.—The absorption or extinguishment of one contract into another.

Metallic Currency.—Silver and gold coins, forming the circulating medium of a country.

Minor.—Same as infant; a person under twenty-one years.

Misfeasance.—A trespass; doing improperly an act that might be done lawfully.

Misdemeanor.—A lower kind of crime; an indictable offense not amounting to felony.

Mitigation.—The abatement of a judgment, penalty or punishment.

Money.—Coin; any currency lawfully used instead of coin, as bank-notes.

Money Broker.—A broker who deals in money.

Monopoly.—Sole permission or appropriated power to deal in any species of goods.

Monetary.—Pertaining to or consisting in money.

Mortgage.—A grant or conveyance of an estate or property to a creditor, for the security of a debt, and to become void on payment of such debt.

Municipal.—Of or belonging to a city.

Municipal Law.—The system of law of any one nation or State.

Muster.—A collection of samples.

N

National Banks.—Banks organized under the conditions of an act of Congress; they can issue bank-notes only to the amount of United States Bonds they have deposited in the U. S. Treasury; the object is to unify the currency.

Navigation.—The science of conducting vessels on the ocean

Negotiable.—Transferable by assignment or indorsement to another person.

Negotiate.—To transact business; to hold in intercourse in bargain or trade.

Negotiable Paper.—Notes, bills and drafts which may be transferred with all their rights by indorsement or assignment.

Net.—Clear of all charges and deductions.

Net Profits.—Clear profit after deducting losses.

Net Weight.—Weight of merchandise without bag, box or covering.

Nominal.—In name only, very small, as a nominal price.

Non-feasance.—An omission of what ought to be done.

Note.—A written or printed paper acknowledging a debt and promising payment.

Note Book.—A book in which notes of hand are recorded.
Notarial Seal.—Seal of a notary public.
Notary Public.—A public officer who attests or certifies to acknowledgments of deeds and other papers, protests notes and bills.
National Currency. National bank bills.
National Damages.—Those given for the violation of a right from which no actual loss has resulted.
Nonuser.—A failure to use rights and privileges.

O

Obligation.—A duty; a binding engagement; a bond with a condition annexed.
Open Account.—A running or unsettled account with an individual or firm.
Open Policy.—An insurance policy covering undefined risks, which provides that its term shall become definite by subsequent additions or indorsements.
Option.—Permission to choose; a stockholder's term for the privilege of taking or delivering at a future day a certain number of shares of a given stock at a price agreed upon.
Order.—A commission to purchase; direction to pay money or to deliver goods.
Order Book.—A book in which orders received are entered.
Ordinary.—A ship in harbor is said to be in ordinary; of medium quality.
Ordinance.—A rule, or order, or law; usually applied to the acts or laws passed by the common council of a city.
Ordnance.—All kinds of large guns.
Outlawed.—A debt is said to be outlawed that has existed for a certain length of time, after which the law, on that ground alone, prevents its being enforced.
Ostensible Partners.—Those known to the public.
Outstanding Accounts.—Book debts not yet collected.
Outstanding Debts.—Unpaid debts.
Overdraw.—To call for more money than is on deposit.
Overdraft.—A check paid above the amount on deposit.
Overdue.—Applied to a note or draft, the specified time for payment of which has passed.
Overt.—Apparent, manifest; open.
Owe.—To be obliged to pay.

P

Panic.—A financial crisis among business men; a monetary pressure; generally the result of overtrading and speculation.
Paper Money.—Bills of banks or of the Government passing current as money.
Par.—State of equality in value, equality of nominal and actual value.
Parol.—Oral declaration; word of mouth.
Par Value.—The face or nominal value of a commercial paper.
Par of Exchange.—The value of a unit of one country's coinage expressed in that of another's.
Partner.—An associate in business; member of a partnership.
Partnership.—Contract of two or more persons to join money, stock or skill in trade for mutual benefit.
Part Owner.—One of several owners of a ship; the relation differs materially from partnership.
Pass Book.—A book kept by a customer in which entries of purchases is made; a bank book.
Passport.—A permission from a Government to travel, with identification and certificate of nationality; a document carried by neutral merchant vessels in time of war for their protection.
Pawnbroker.—One who holds money at interest on security of goods deposited.
Payable.—Justly due; capable of payment.
Payee.—The person to whose order a note, bill or draft is to be paid.
Payer.—One who pays.
Penalty.—Forfeiture, or sum to be forfeited for non-performance of an agreement.
Per Cent.—By the hundred; rates of interest, discount, etc.
Percentage.—An allowance reckoned by hundredth parts; commission.
Per Contra.—To the opposite side of an account.
Permit.—Written authority to remove dutiable goods.
Petty Cash Book.—Account of small receipts and expenses
Pledge.—A pawn; personal property deposited as security.
Policy.—The written contract of insurance.
Port.—A harbor for vessels; a commercial city.
Port of Entry.—A port where a custom house is established for the entry of imports.

Post Dated.—Having a date subsequent to that at which it is actually made.

Posting.—To transfer from day book or journal to the ledger.

Post Obit.—A promise to pay loans after the death of some person.

Power of Attorney.—Written authority from one person to another to act for him.

Preferred Creditor.-One whose claims a bankrupt debtor elects to settle first.

Premises.—The thing previously mentioned, lands, estate, etc.

Premium.—The percentage paid for insurance; the excess of value above par.

Price.--Current value, or rate paid or demanded in barter.

Price Current.—A statement showing prevailing price of merchandise, stocks or securities.

Price List.--A list of articles with prices attached.

Prima Facie.—At first view of appearance.

Principal.—An employer; the head of a firm; a capital sum placed at interest.

Proceeds.- The sum realized by a sale.

Procuration.—A general letter or power of attorney: an instrument empowering one person to act for another.

Produce.--Farm products of all kinds.

Profit and Loss.--An account in which gains and losses are balanced.

Promissory Note.--(See Note).

Pro Rata.—A proportional distribution.

Protective Tariff.--Duty imposed on imports to encourage manufacture,

Protest.—A formal declaration made by a notary for want of payment of a note or bill of exchange.

Purveyor.--One who supplies provisions.

Q

Quarantine.—To prohibit a ship from intercourse with shore when suspected of having contagious diseases on board; the place of such prohibition.

Quasi.—As if; as though; quasi corporations are bodies like corporations, and yet not strictly corporations.

R

Rate.--The ratio or standard.

Ratification.--Giving force to a contract made by the person in question, but now in force, or by another man as his agent.

Real Estate.—Property in houses or lands.

Real Property.-That which is fixed or immovable; land with whatever is erected or growing upon it, with whatever is beneath or above the surface.

Rebatement.—Deduction on account of prompt payment, discount.

Receipt.— An acknowledgment of payment in writing.

Receipt Book.—A book in which receipts are filed.

Receiver.—An officer appointed by a court to hold in trust property in litigation, or to wind up the affairs of a bankrupt concern.

Reciprocity Treaty.—A commercial treaty between two nations securing mutual advantages.

Reclamation.—A claim made against the seller of goods which prove deficient or defective.

Refund.—To repay; to restore.

Register.—A ship's paper issued by the Custom House, stating description, name, tonnage, nationality and ownership.

Registry.—The entering or recording of real estate conveyances in books of public record.

Remittance.—Transfer of funds from one party to another.

Release —An instrument in the general form of a deed which in distinct terms remits the claim to which it refers.

Remedy.—The legal means employed to enforce a right or redress an injury.

Rent.—Compensation for the use of real property.

Repository.—A warehouse or storehouse.

Reprisal.—The seizure of ships or property to indemnify for unlawful seizure or detention.

Resources.—Available means; funds.

Respondential Bond.—A pledge of a cargo at sea.

Retail.—Selling goods in small quantities.

Retire.—To take up one's note before due; to relinquish business.

Returns.—Profit of an investment.

Revenue.—Income; return; annual income of a nation for public uses.

Revenue Cutters.—Small vessels to aid revenue officers in the collection of duties or to prevent smuggling.

Reversion.—Right to possess property after the happening of some event, as the death of a person.

Revert.—To fall again into the possession of the donor, or of the former proprietor.

S

Sale.—Transfer of property for a consideration.

Salvage.—A compensation to those who rescue a ship or a cargo from loss.

Salvor.—One who voluntarily saves a ship or a cargo from peril.

Sans Recourse.—Without recourse; sometimes added to the indorsement of a note or bill to protect an indorser from liability.

Scrip—Certificate of stock given before registration.

Secondarily.—Applied to an indorser of a note or drawer of a bill, signifying that he is only conditionally liable, or liable if the maker and drawee fail.

Seaworthy.—Fit for a voyage and properly equipped.

Sample.—A small portion of merchandise taken as a specimen of quality.

Securities.—Documents securing a right to property.

Seize.—To take possession of by virtue of a warrant or legal authority.

Seller's Option.—A term mostly confined to the sales of stocks, for a sale which gives to the seller the option of delivering the article sold within a certain time, the buyer paying interest up to delivery.

Shipment.—That which is shipped; embarkation.

Set-off.—A claim which one party has against another who has a claim against him; a counter claim.

Shipper.—One who gives merchandise to another for transportation.

Sight.—Time of presenting bill to drawee.

Short.—To "sell short" is to sell for future delivery what one does not possess, in hopes that prices will fall.

Shrinkage.—Reduction in bulk or measurement.

Short Exchange.—Bills of exchange payable at sight or in a few days.

Sight Draft.—One payable at sight, i. e., when presented.

Signature.—The name of a person written with his own hand, signifying his consent to the writing above it.

Silent Partner.—One who furnishes capital, but takes no active part in a business.

Simple Interest.—Interest on principal alone; not compound.

Sinking Fund.—A fund set apart from earnings or other income, for the redemption of debts of Government, or of a corporation.

Sleeping Partner.—One who shares the profits of a business without letting his name appear, or taking part in it actively.

Slop Shop.—A store where cheap ready-made clothing is sold.

Smuggler.—One who avoids the payment of duties by secretly importing goods into a country; a vessel engaged in smuggling.

Solvency.—Ability to pay all debts or just claims.

Specialty.—A contract or obligation under seal.

Statement.—Usually a list of property, or resources and liabilities.

Speculation.—A business investment out of the ordinary run of trade.

Stamp Duty.—Law requiring stamps to be affixed to checks and proprietary articles.

Solicitor.—An attorney or advocate; the title of a person admitted to practice in the court of chancery or equity.

Staple.—Principal commodity of a country or district.

Statistics.—A collection of facts arranged and classified.

Statute.—A positive law, established by act of legislature.

Statute Law.—Enactments by the legislature, written, as opposed to common or unwritten law.

Sterling.—Lawful or standard money of Great Britain.

Stock.—Shares in the capital of a corporation; goods on hand.

Stock Broker.—One who buys and sells stock on commission.

Stock Exchange.—Place where shares of stock are bought and sold.

Stockholder.—One who holds shares of stock.

Stock Jobber.—One who speculates in stocks.

Stipend.—Settled pay or compensation for services.

Stipulation.—A contract or bargain.

Stoppage in Transitu.—The seller of goods upon credit resuming possession after their shipment before they get into actual possession of the buyer.

Storage.—Sums paid for storing goods; the business of storing goods.
Stowage.—Careful arrangement of cargo in a ship.
Sundries.—Unclassified articles.
Sue. To seek justice by a legal process.
Supercargo.—An agent who accompanies a cargo to care for it and sell it.
Surcharge.—An overcharge.
Surety.—One who binds himself to pay money in case another person fails to pay, to fill a contract or to serve with integrity.
Surveyor.—Agent of an insurance company to examine and report on applications for marine or fire insurance.
Suspend.—To fail; to stop payment.
Sutler.—One authorized to sell goods to an army.
Suttle Weight.—Weight after tare is deducted.
Suspense Account.—An account used to contain balances of personal accounts which may be considered doubtful.

T

Tacit.—Implied but not expressed.
Tally.—Keeping account by checking off.
Tally Man.—One who receives payment for goods in weekly installments.
Tare.—An allowance for the cask, bag or covering in which goods are contained.
Tariff.—A list of duties to be imposed on goods imported or exported.
Tax.—A levy made upon property for the support of the Government.
Teller.—Officer in a bank who receives and pays out money.
Tenants.—Those who lease or rent real estate
Tenants in Common.—Persons holding land, etc., by several and distinct titles and not by joint title.
Tenement.—That which is held.
Tender.—Offer to supply money or articles; to offer or present for acceptance
Tenure.—The manner of holding property in lands.
Testator.—The person leaving a valid will.
Textile Fabrics.—All kinds of woven goods, generally restricted to piece goods.
Tickler.—A book containing memoranda of notes and debts, arranged in the order of their maturity.
Time Bargain.—A contract for the future sale of stock.
Time Draft.—A draft maturing at a future specified time.
Tonnage.—The weight of goods carried in a boat or ship.
Trade Discount.—An allowance made to dealers in the same line.
Trade Mark.—Letters, figures, or devices used on goods and labels which a manufacturer has the sole right to use.
Trade Price.—That allowed by wholesale dealers to retailers.
Trade Sale.—An auction by and for trade; especially of booksellers.
Trades Union.—A combination of workingmen to protect their own interests.
Traffic.—Business done, especially that of a railroad.
Transshipment.—Removing goods from one ship or conveyance to another.
Transportation.—Conveying goods from one place to another.
Transit Duty.—Tax imposed on goods for passing through a country.
Traveler.—A commercial agent; a drummer.
Transact.—To perform commercial business; to conduct matters.
Transfer.—To convey right, title or property.
Treasury.—A place where public revenues are deposited and kept.
Treasury Notes.—Notes of various denominations issued by the Government, and received in payment of all dues, except duties on imports.
Treaty.—An agreement or compact between two or more nations.
Tret.—Allowance for waste of 4 lbs. in 104 lbs., after tare has been deducted.
Triplicate.—To make three copies of a paper; the third copy,
Trustee.—One who is intrusted with property for the benefit of another.

U

Ullage.—What a cask lacks of being full.
Unclaimed Goods.—Goods in Government storehouses unclaimed after three years from importation, or on which duties have not been paid, may be sold at auction.
Ultimo or Ult.—Last month.
Uncurrent.—Not current; not passing in common payment.
Undersell.—To sell below the trade price.
Underwriter.—An insurer, so called because he underwrites his name to the condition of the policy.
Unseaworthy.—Unfit for voyage in condition or equipment.

Unsound.—In bad condition; of doubtful solvency.
Usage of Trade—Custom, or the frequent repetition of the same act in business.
Usance.—Business custom which is generally conceded and acted upon.
Usury.—Exorbitant interest, formerly merely interest.
United States Notes.—A written promise to pay to the bearer, on demand, a certain sum of money, issued by the United States Government and used as money.

V

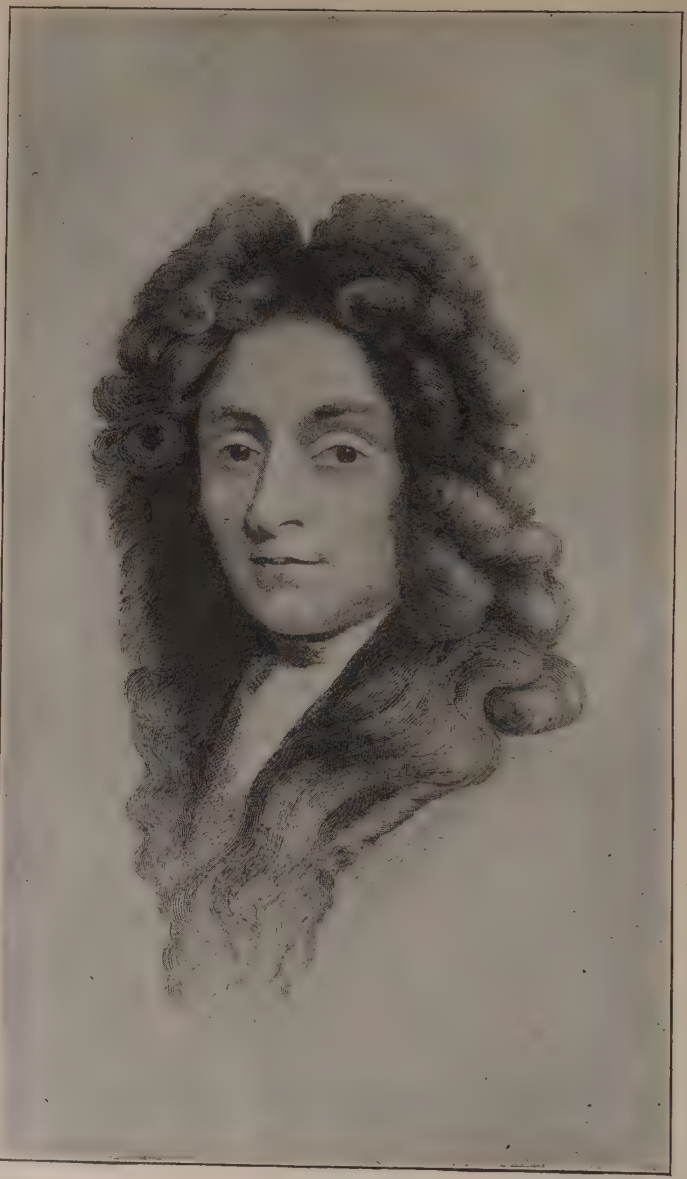
Valid.—Having legal strength or force.
Validity.—The quality of being good in law.
Value.—Rate of estimated worth; amount obtainable in exchange for a thing.
Value Received.—Phrase used in notes or bills to express a consideration indefinitely.
Valued Policy.—One which fixes the value of property insured.
Vend.—To sell
Vendee.—The person to whom a thing is sold.
Vender.—A seller.
Vendue.—An auction sale.
Venture.—A mercantile speculation or investment.
Void.—Null; having no legal or binding force.
Voidable.—Having some force, but capable of being adjudged void.
Voucher.—A book, receipt, entry or other document which establishes the truth of accounts.

W

Wages.—Hire, reward, salary.
Waiver.—The act of waiving; of not insisting on some right, claim or privilege.
Wares.—Goods, merchandise, commodities.
Warehouseman.—One who stores goods for pay.
Warrant.—A precept authorizing an officer to seize an offender and bring him to justice; also to insure against defects.
Warranty.—An undertaking that goods or title are as represented.
Wastage.—Loss in handling; shrinkage.
Waste.—Refuse material.
Waybill.—A document containing a list and description of goods sent by a common carrier by land.
Wharfage.—Fee or duty for using a wharf.
Wharfinger.—The proprietor of a wharf.
Wreckage.—Merchandise from a wreck.
Wreck-Master.—A person appointed by law to take charge of goods, etc., thrown ashore after a shipwreck.

PART XV

Home Building, Plans, Blue Prints, etc.



1632 **SIR CHRISTOPHER WREN** 1723

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The World's Famous Architect

HOME BUILDING DEPARTMENT

This department contains the perspective view and floor plans of thirty low and medium priced houses, such as 75 per cent of the people of to-day desire to build. Great care has been exercised in the selection of practical and attractive designs, and special effort made to provide for the most economical constructions, utilizing every bit of space to the best advantage. This gives both home-builder and contractor the benefit of the saving of many dollars.

Every plan is designed by a licensed architect who stands at the head of his profession in this class of work. The fact that these houses are being built in every part of the country bespeaks more for our plans than anything else we can say. Furnishing the same plans to so many people enables us to supply them at the remarkably low prices quoted.

The plans are printed on the best quality of Gallia Blue Print Paper and are perfect and complete in every respect. They also give instructions for the working of all material to the best advantage.

What We Furnish in Blue Prints.

Foundation and Cellar Plan.—This sheet shows the shape and size of all walls, piers, footings, posts, etc., and of what materials they are constructed; shows the location of all windows, doors, chimneys, ash pits, partitions and the like. The different wall sections are given showing their construction and measurements from all the different points.

Floor Plans.—These plans show the shape and size of all rooms, halls and closets; the location and size of all doors and windows; the position of all plumbing fixtures, gas lights, registers, pantry work, etc., and all the measurements that are necessary are given.

Elevations.—A front, right, left and rear elevation are furnished with all the plans. These drawings are complete and accurate in every respect. They show the shape, size and

location of all doors and windows, porches, cornices, towers, bays and the like, and, in fact, give you an exact scale picture of the house as it should be at completion. Full wall sections are given showing the constructions from foundation to roof, the height of stories between joists, height of plates, pitch of roof, etc.

Roof Plan.—This plan is furnished where the roof construction is at all intricate. It shows the location of all hips, valleys, ridges, decks, etc.

All the above drawings are made to scale one-quarter inch to the foot.

Details.—All necessary details of the interior work, such as door and window casings and trim, base, stools, picture moulding, doors, newel posts, balusters, rail, etc., accompany each set of plans. Part is shown in full size, while some of the larger work, such as stair construction, is drawn to a scale of one and one-half inch to the foot.

Specifications.

The specifications are typewritten on good Bond Linen Paper and consist of sixteen to twenty pages of closely written matter, giving full instructions for carrying out the work.

Both plans and specifications are substantially and artistically bound in cloth and heavy waterproof paper, making a handsome and durable covering.

Free Plans for Insurance Adjustment.

Without one cent of cost to you we keep a record of the number of your house plan so that in case of fire all it will be necessary for you to do is to drop us a line and we will forward to you free of charge a duplicate set of plans, together with an affidavit, giving number of design and date when furnished. This will enable you to get a speedy and satisfactory adjustment of your insurance.

Our Guarantee.

In order to assure our customers that they run no risk whatever, money may be sent to our **bank** with instructions not to turn it over to us unless we are perfectly reliable.

If upon receipt of plans you do not find them exactly as represented, accurate in every respect and as well prepared as those furnished by any architect in the U. S. we will refund your money on receipt of the plans in perfect condition.

Estimated Cost.

It is impossible for any one to estimate the cost of a building and have the figures hold good in all sections of the country. We do not claim to be able to do it. The estimated cost of the houses we illustrate is based on the most favorable conditions in all respects, and does not include plumbing and heating. We advise consultation with your local responsible material dealers and contractors. Realizing too that there are hardly two sections of the country where the same material is used all through, we do not furnish a lumber bill. Our plans are so comprehensive that any carpenter can easily take off the lumber bill.

$35.00 to $70.00 Saved.—One great advantage to be gained in selecting a plan from this book is that complete working Blue Print plans and specifications may be secured immediately at only $5.00 per set. The regular price charged by most architects is from $40.00 to $75.00 for the same work. Besides, these plans aid you in determining what you want.

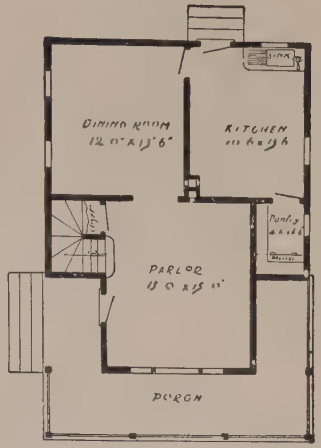
No. 1002

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1002

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $800 to $950 according to the locality in which it is built.

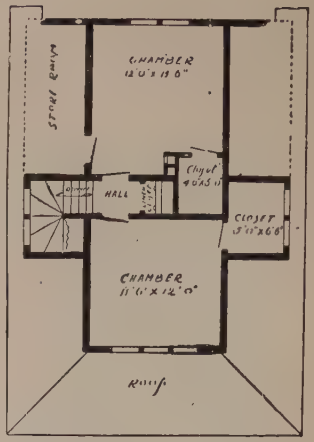
FLOOR PLANS OF DESIGN No. 1002



FIRST FLOOR PLAN

SIZE

Width, 24 feet.
Length, 30 feet,
exclusive of porch.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about fifteen pages of typewritten matter.

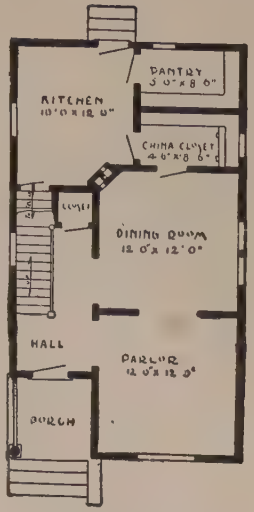
No. 1004

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1004

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $1,050 to $1,200 according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1004

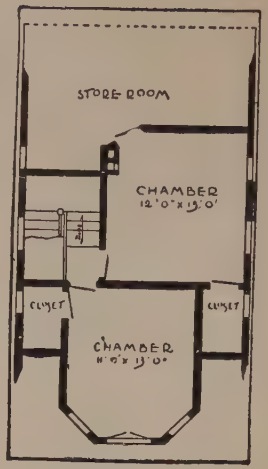


FIRST FLOOR PLAN

SIZE

Width, 20 feet.

Length, 36 feet.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about fifteen pages of typewritten matter.

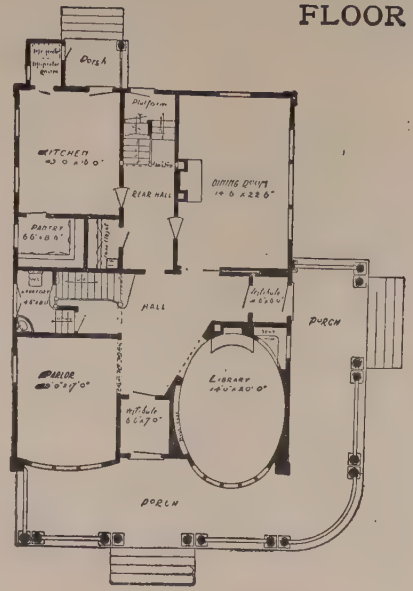
No. 1007

PRICE
of Plans and
Specifications
$25.00

HOUSE DESIGN NO. 1007.

Full and complete working plans and specifications of this house will be furnished for $25.00. Cost of this house is from $6500 to $6750, according to the locality in which it is built.

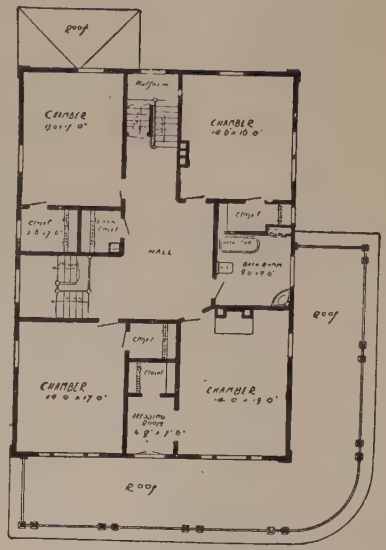
FLOOR PLANS OF DESIGN No. 1007



FIRST FLOOR PLAN

SIZE

Width, 36 feet.
Length, 50 feet,
exclusive of porches.



SECOND FLOOR PLAN

Blue-prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty-five pages of typewritten matter.

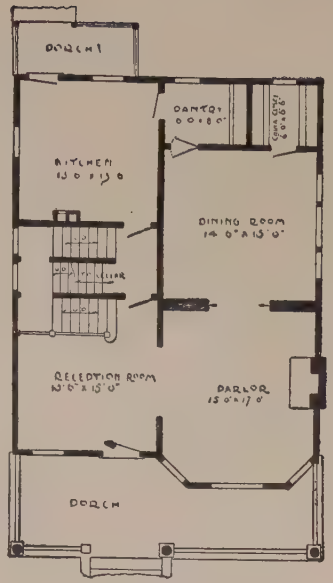
No. 1009

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1009

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $2500 to $2750, according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1009



FIRST FLOOR PLAN

SIZE

Width, 30 feet.
Length, 40 feet,
exclusive of porches.

SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; roof and attic plan; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

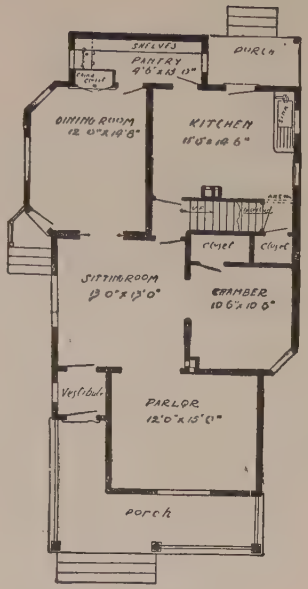
No. 1012

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1012

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $1,750 to $1,900 according to the locality in which it is built.

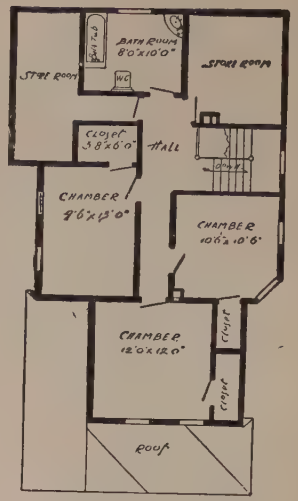
FLOOR PLANS OF DESIGN No. 1012



FIRST FLOOR PLAN

SIZE

Width, 28 feet.
Length, 42 feet,
exclusive of porches.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details. Specifications consist of about twenty pages of typewritten matter.

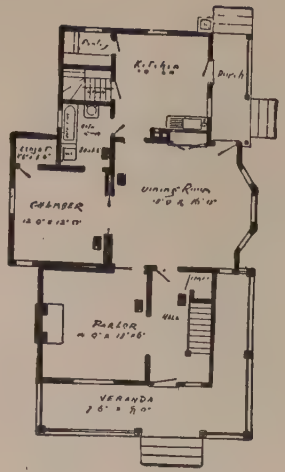
No. 1014

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN No. 1014

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $1,600 to $1,800 according to the locality in which it is built.

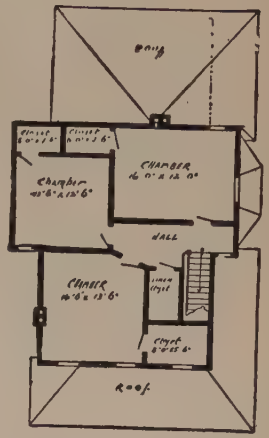
FLOOR PLANS OF DESIGN No. 1014



FIRST FLOOR PLAN

SIZE

Width, 32 feet.
Length, 46 feet,
exclusive of porches.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

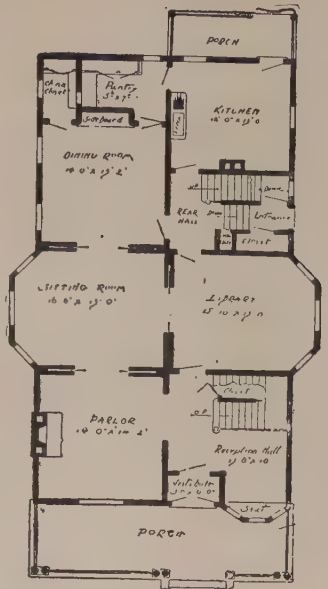
No. 1015

PRICE
of Plans and
Specifications
$7.50

HOUSE DESIGN NO. 1015

Full and complete working plans and specifications of this house will be furnished for $7.50.
Cost of this house is from $3,700 to $4,000 according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1015

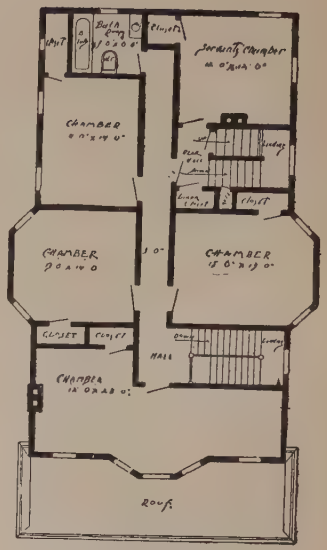


FIRST FLOOR PLAN

SIZE

Width, 34 feet.
Length, 50 feet,
exclusive of porches.

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details. Specifications consist of about twenty pages of typewritten matter.



SECOND FLOOR PLAN

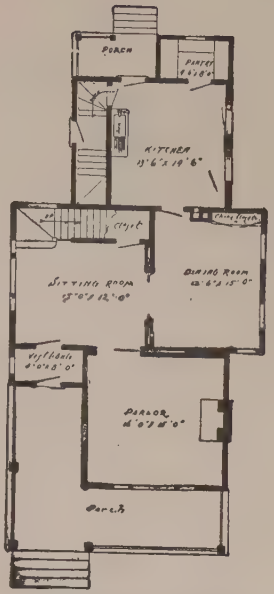
No. 1018

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1018

Full and complete working plans and specifications of this house will be furnished for $5.00.
Cost of this house is from $1,700 to $1,900 according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1018



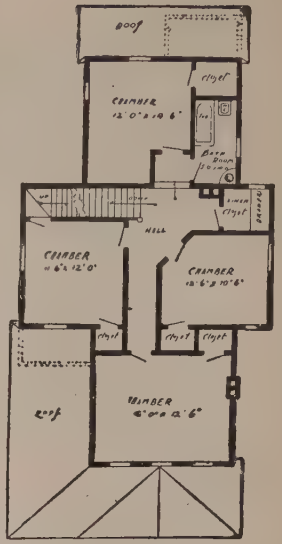
FIRST FLOOR PLAN

SIZE

Width, 30 feet.
Length, 48 feet,
exclusive of porches.

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.



SECOND FLOOR PLAN

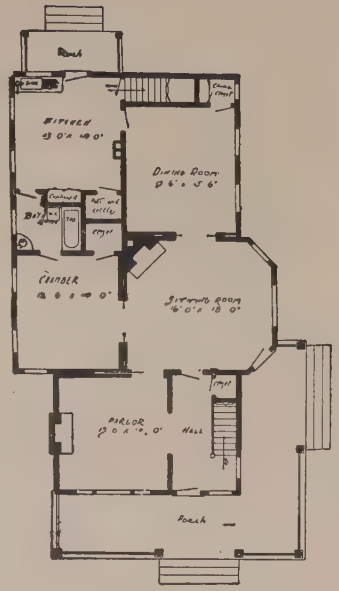
No. 1019

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1019

Full and complete working plans and specifications of this house will be turnished for $5.00
Cost of this house is from $1900 to $2100, according to the locality in which it is built.

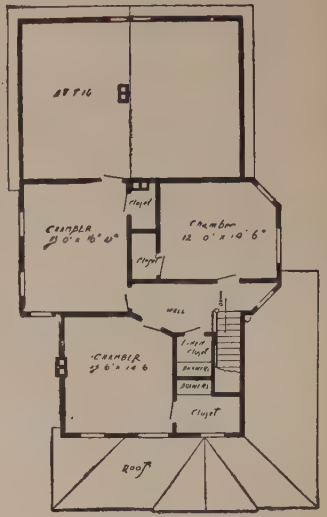
FLOOR PLANS OF DESIGN No. 1019



FIRST FLOOR PLAN

SIZE

Width, 32 feet.
Length, 52 feet,
exclusive of porches.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details. Specifications consist of about twenty pages of typewritten matter.

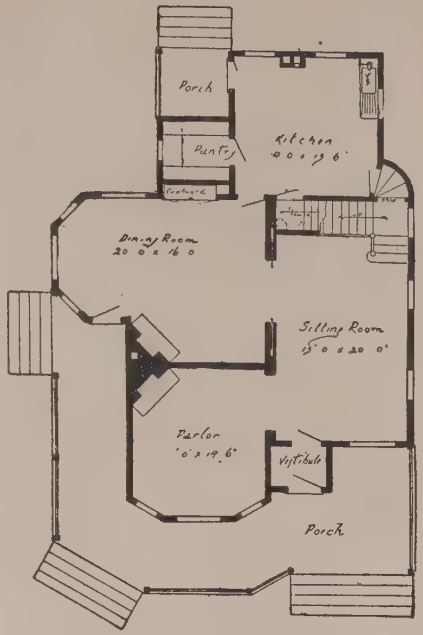
No. 1025

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1025

Full and complete working plans and specifications of this house will be furnished for $5.00.
Cost of this house is from $1,950 to $2,200 according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1025



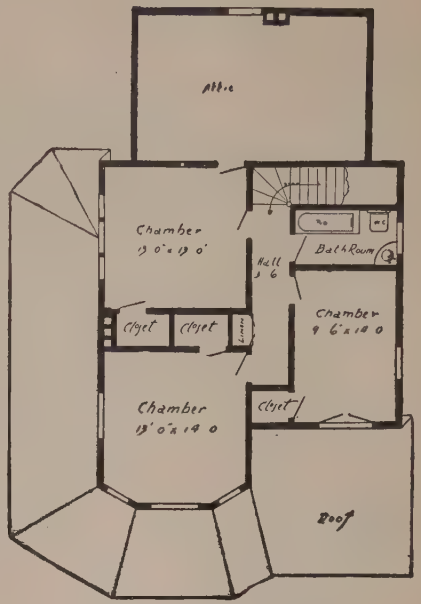
FIRST FLOOR PLAN

SIZE

Width, 35 feet.
Length, 46 feet,
exclusive of porches.

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.



SECOND FLOOR PLAN

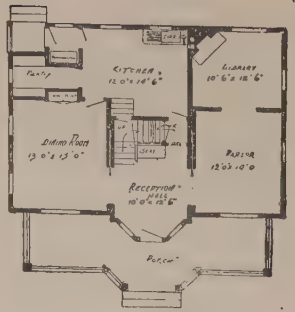
No. 1026

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1026

Full and complete working plans and specifications of this house will be furnished for $5.00.
Cost of this house is from $1,850 to $2,000 according to the locality in which it is built.

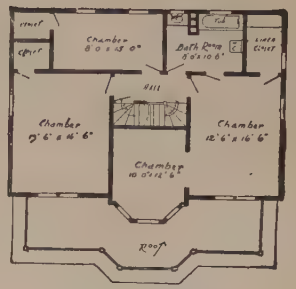
FLOOR PLANS OF DESIGN No. 1026



FIRST FLOOR PLAN

SIZE

Width, 38 feet.
Length, 26 feet,
exclusive of porches.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

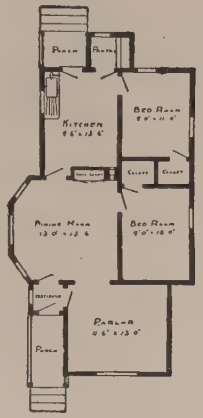
No. 1035

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1035

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $900 to $1,050 according to the locality in which it is built.

FLOOR PLAN OF DESIGN No. 1035



FLOOR PLAN

SIZE

Width, 24 feet.

Length, 40 feet.

Blue prints consist of foundation plan; floor plan; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about fifteen pages of typewritten matter.

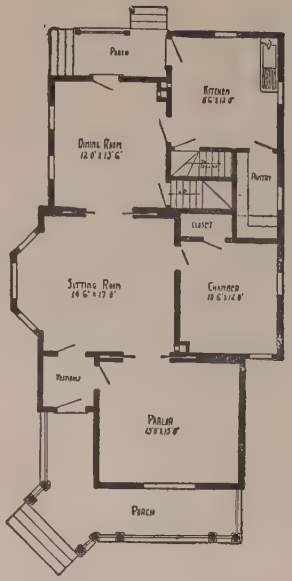
No. 1040

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1040

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $2,000 to $2,250 according to the locality in which it is built.

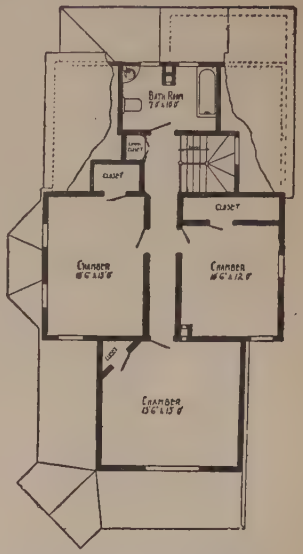
FLOOR PLANS OF DESIGN No. 1040



FIRST FLOOR PLAN

SIZE

Width, 29 feet.
Length, 49 feet,
exclusive of porches.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plans; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

No. 1045

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1045

Full and complete working plans and specifications of this house will be furnished for $5.00.
Cost of this house is from $1,350 to $1,500, according to the locality in which it is built.

FLOOR PLAN

FLOOR PLAN OF DESIGN No. 1045

SIZE

Width, 30 feet.
Length, 46 feet,
exclusive of porches.

Blue prints consist of cellar and foundation plan; floor and roof plans; front, rear, two side elevations; wall sections and all necessary interior details. Specifications consist of about fifteen pages of typewritten matter.

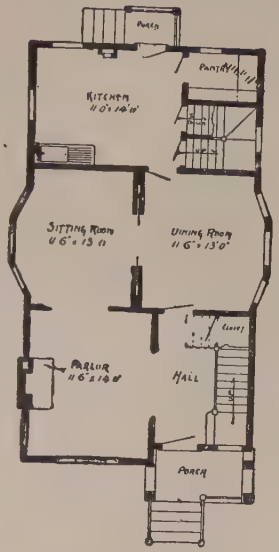
No. 1052

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1052

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $2,000 to $2,200 according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1052



FIRST FLOOR PLAN

SIZE

Width, 25 feet.
Length, 40 feet,
exclusive of porches.

SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; roof and attic plan; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

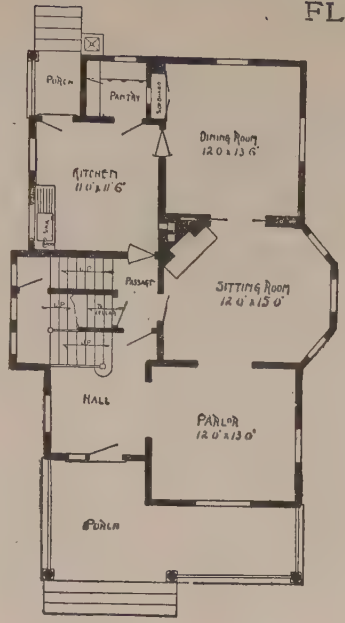
No. 1054

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1054

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $2250 to $2400, according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1054



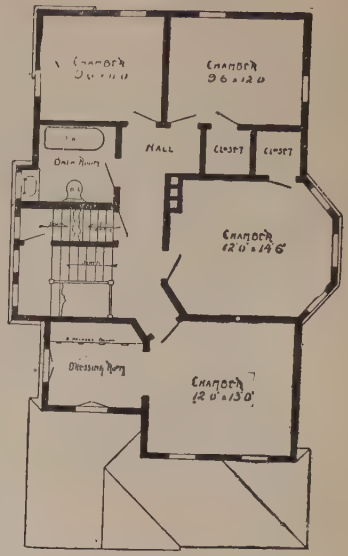
FIRST FLOOR PLAN

SIZE

Width, 28 feet.
Length, 40 feet,
exclusive of porch.

Blue prints consist of cellar and foundation plan; first and second floor plans; roof plan; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.



SECOND FLOOR PLAN

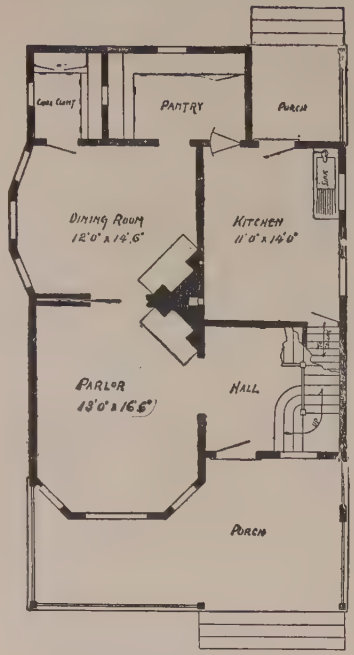
No. 1057

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1057

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $1500 to $1650, according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1057



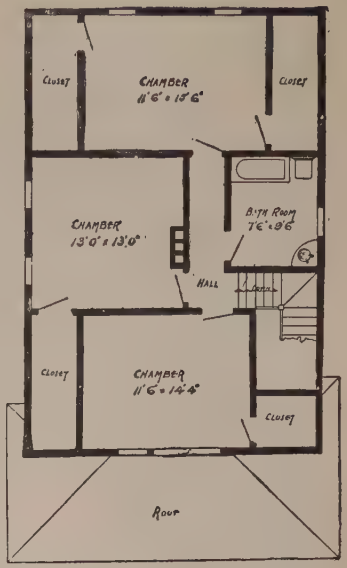
FIRST FLOOR PLAN

SIZE

Width, 27 feet,
Length, 38 feet,
exclusive of porches.

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about fifteen pages of typewritten matter.



SECOND FLOOR PLAN

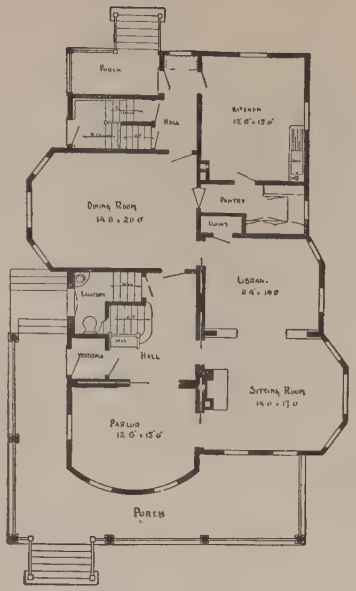
No. 1060

PRICE
of Plans and
Specifications
$12.00

HOUSE DESIGN NO. 1060

Full and complete working plans and specifications of this house will be furnished for $12.00. Cost of this house is from $4,000 to $4,250, according to the locality in which it is built.

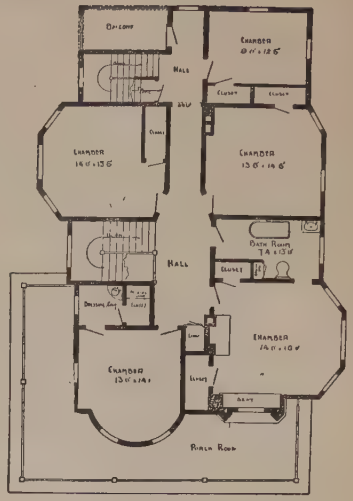
FLOOR PLANS OF DESIGN No. 1060



FIRST FLOOR PLAN

SIZE

Width, 39 feet.
Length, 54 feet,
exclusive of porches.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; attic and roof plan; front, rear, two side elevations; wall sections and all necessary interior details. Specifications consist of about twenty pages of typewritten matter.

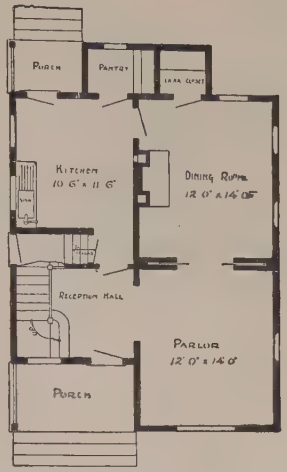
No. 1066

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1066

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $1.350 to $1,500 according to the locality in which it is built.

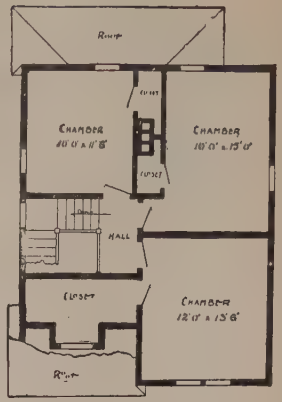
FLOOR PLANS OF DESIGN No. 1066



FIRST FLOOR PLAN

SIZE

Width, 24 feet,
Length, 30 feet,
exclusive of porch.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

No. 1073

PRICE
of Plans and
Specifications
$8.00

HOUSE DESIGN NO. 1073

Full and complete working plans and specifications of this house will be furnished for $8.00.
Cost of this house is from $2,800 to $3,100 according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1073

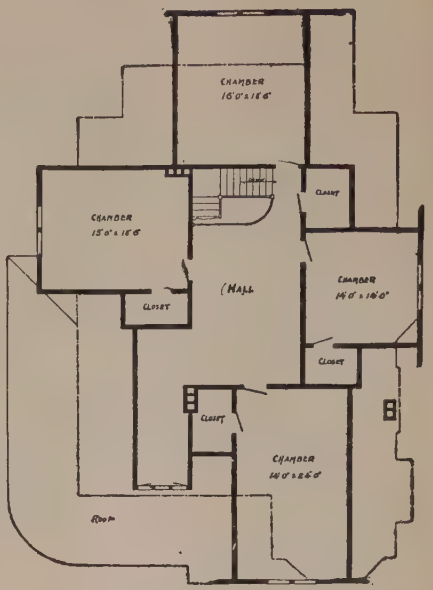
FIRST FLOOR PLAN

SIZE

Width, 46 feet.
Length, 64 feet,
exclusive of porches.

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

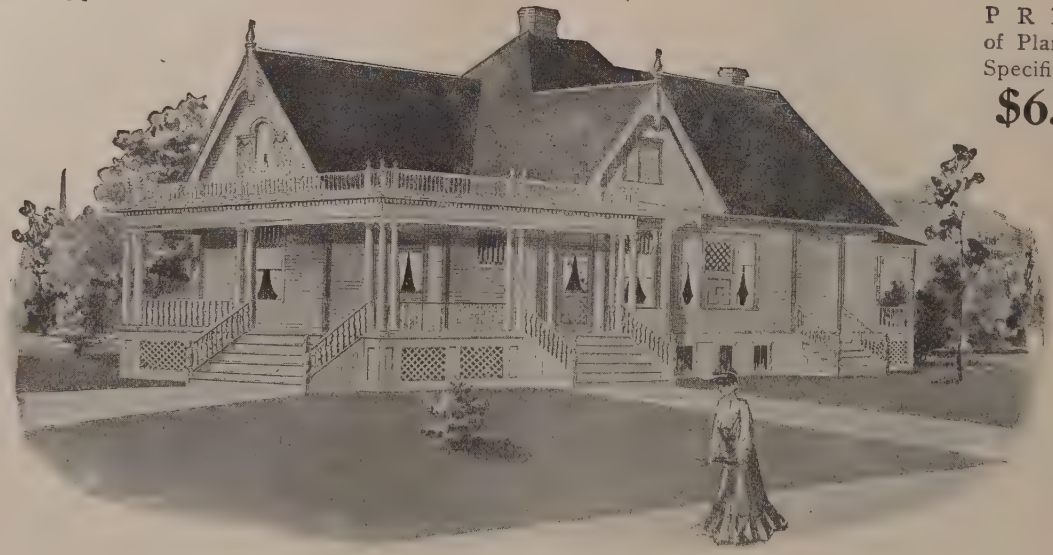
Specifications consist of about twenty pages of typewritten matter.



SECOND FLOOR PLAN

No. 1077

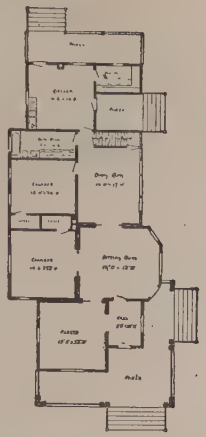
PRICE
of Plans and
Specifications
$6.00



HOUSE DESIGN NO. 1077

Full and complete working plans and specifications of this house will be furnished for $6.00. Cost of this house is from $2,000 to $2,200 according to the locality in which it is built.

FLOOR PLAN OF DESIGN No. 1077



FLOOR PLAN

SIZE

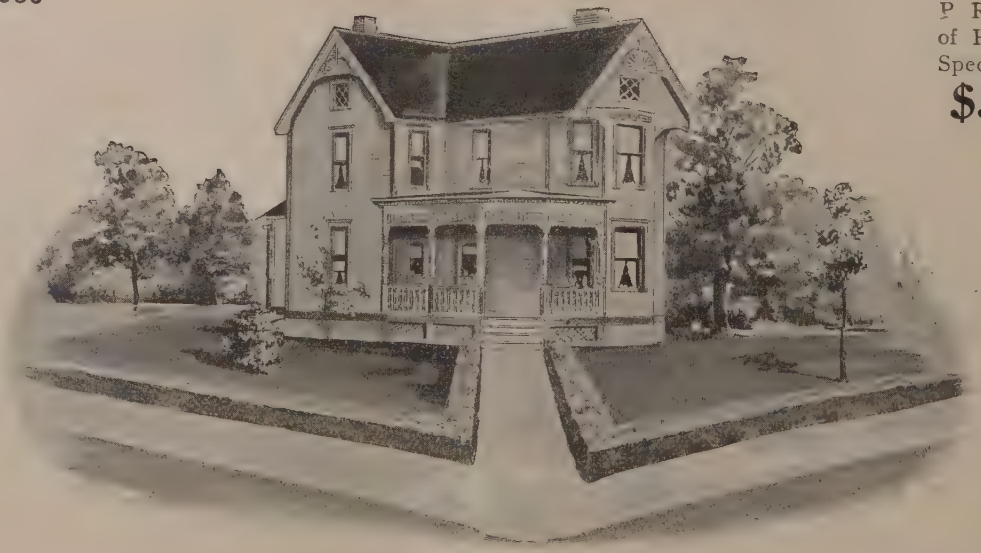
Width, 34 feet 6 inches.
Length, 70 feet,
exclusive of porches.

Blue prints consist of cellar and foundation plan; floor plan; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about fifteen pages of typewritten matter.

No. 1080

PRICE
of Plans and
Specifications
$5.00



HOUSE DESIGN NO. 1080

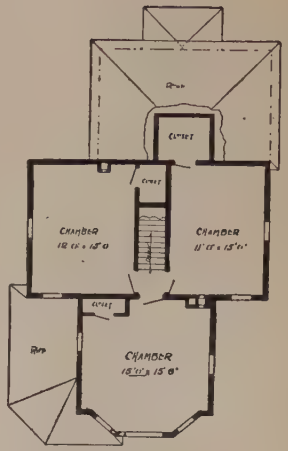
Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $1,750 to $1,900 according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1080

FIRST FLOOR PLAN

SIZE

Width, 28 feet.
Length, 45 feet,
exclusive of porches.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

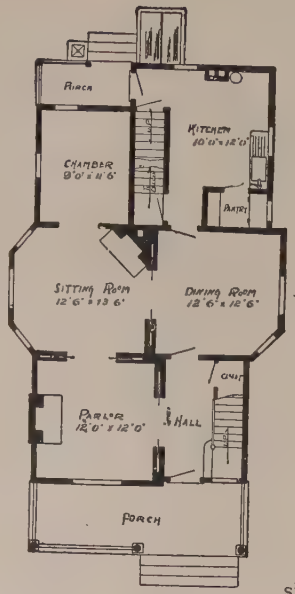
No. 1082

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1082

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $2,000 to $2,250 according to the locality in which it is built.

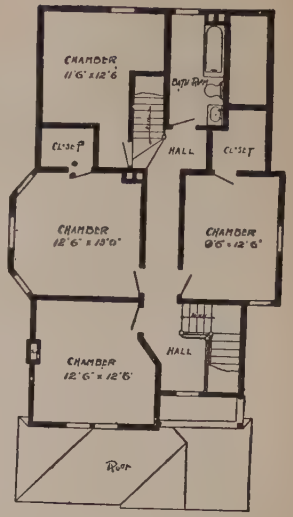
FLOOR PLANS OF DESIGN No. 1082



FIRST FLOOR PLAN

SIZE

Width, 28 feet.
Length, 45 feet,
exclusive of porch.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

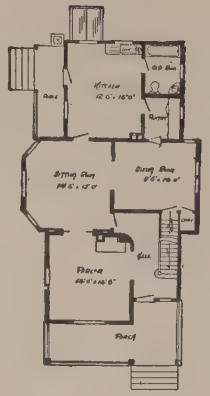
No. 1083

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1083

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $1,950 to $2,100 according to the locality in which it is built.

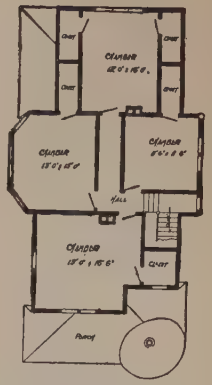
FLOOR PLANS OF DESIGN No. 1083



FIRST FLOOR PLAN

SIZE

Width, 30 feet,
Length, 48 feet,
exclusive of porch



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

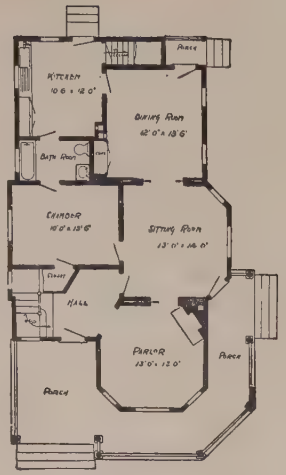
No. 1084

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1084

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $1,950 to $2,100 according to the locality in which it is built.

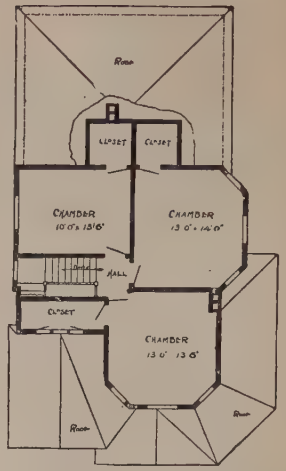
FLOOR PLANS OF DESIGN No. 1084



FIRST FLOOR PLAN

SIZE

Width, 28 feet.
Length, 47 feet,
exclusive of porches.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

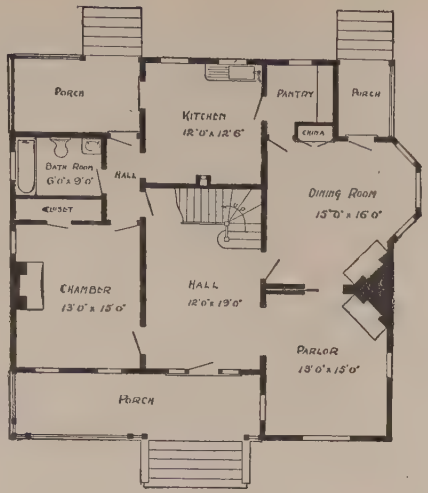
No. 1086

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1086

Full and complete working plans and specifications of this house will be furnished for $5.00. Cost of this house is from $1500 to $1700, according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1086

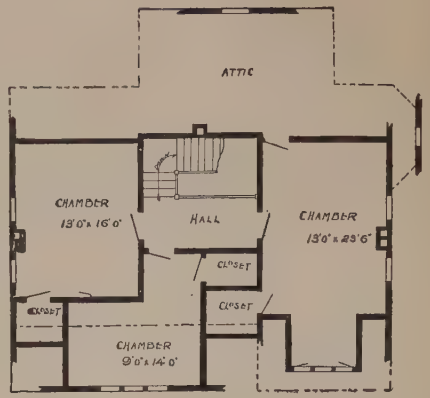


FIRST FLOOR PLAN

SIZE

Width, 40 feet.

Length, 40 feet.



SECOND FLOOR PLAN

Blue prints consist of foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

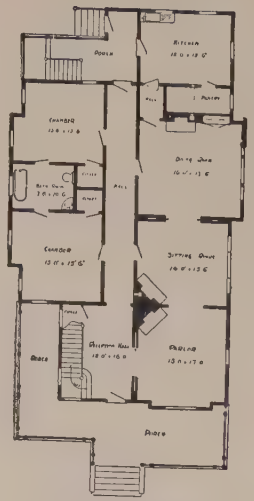
No. 1087

PRICE
of Plans and
Specifications
$8.00

HOUSE DESIGN NO. 1087

Full and complete working plans and specifications of this house will be furnished for $8.00. Cost of this house is from $2,750 to $2,900 according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1087



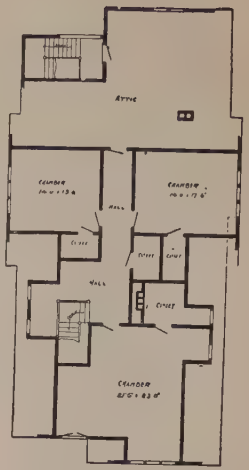
FIRST FLOOR PLAN

SIZE

Width, 40 feet.

Length, 67 feet.

exclusive of porch.



SECOND FLOOR PLAN

Blue prints consist of foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

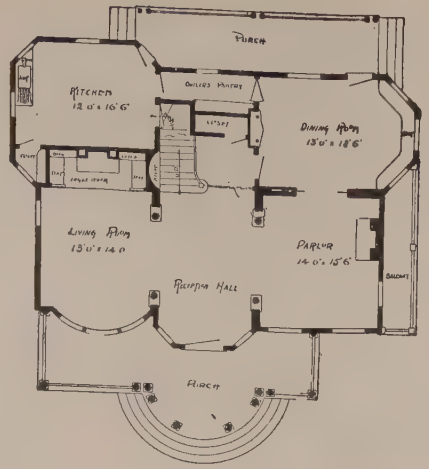
No. 1091

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN NO. 1091

Full and complete working plans and specifications of this house will be furnished for $5.00.
Cost of this house is from $3150 to $3300, according to the locality in which it is built.

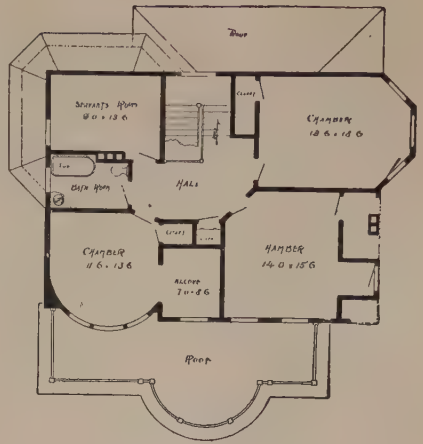
FLOOR PLANS OF DESIGN No. 1091



FIRST FLOOR PLAN

SIZE

Width, 48 feet,
Length, 36 feet,
exclusive of porches.



SECOND FLOOR PLAN

Blue prints consist of cellar and foundation plan; first and second floor plans; front, rear, two side elevations; wall sections, and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.

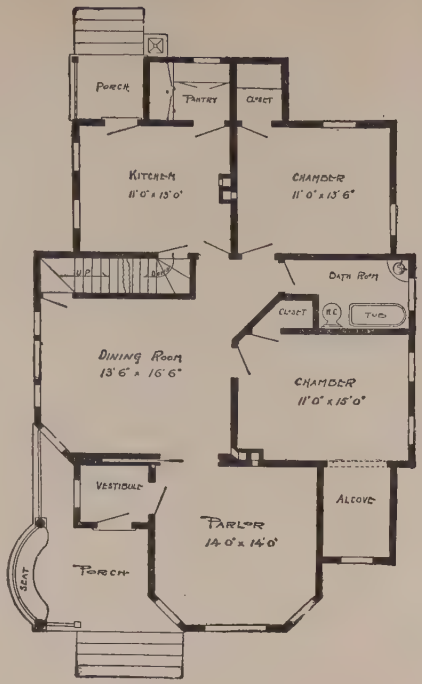
No. 1096

PRICE
of Plans and
Specifications
$5.00

HOUSE DESIGN No. 1096

Full and complete working plans and specifications of this house will be furnished for $5.00.
Cost of this house is from $1,250 to $1,500 according to the locality in which it is built.

FLOOR PLAN OF DESIGN No. 1096



FLOOR PLAN

SIZE

Width, 33 feet.

Length, 50 feet.

Blue prints consist of foundation plan; floor plan; front, rear, two side elevations; wall sections and all necessary interior details. Specifications consist of about fifteen pages of typewritten matter.

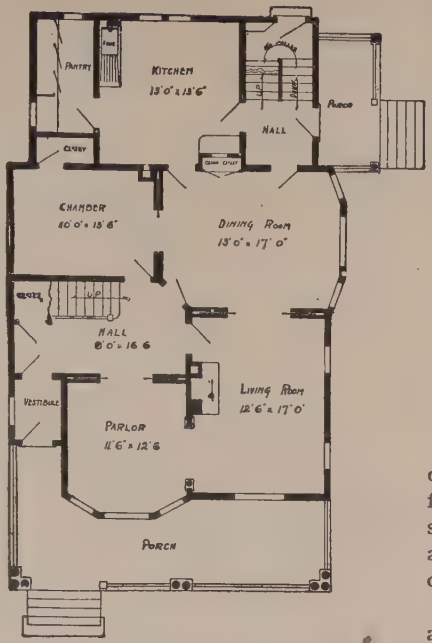
No 1106

PRICE
of Plans and
Specifications
$8.00

HOUSE DESIGN NO. 1106

Full and complete working plans and specifications of this house will be furnished for $8.00.
Cost of this house is from $3,650 to $3,900 according to the locality in which it is built.

FLOOR PLANS OF DESIGN No. 1106



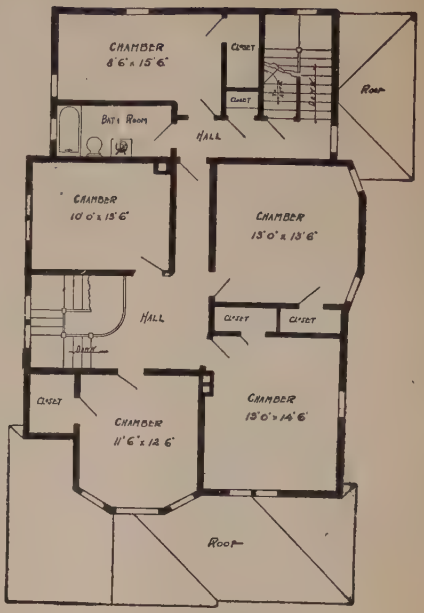
FIRST FLOOR PLAN

SIZE

Width, 32 feet.
Length, 48 feet,
exclusive of porches.

Blue prints consist of foundation plan; first and second floor plans; front, rear, two side elevations; wall sections and all necessary interior details.

Specifications consist of about twenty pages of typewritten matter.



SECOND FLOOR PLAN

NAILS REQUIRED IN CARPENTER WORK.

To case and hang door, 1 pound.
To case and hang one window, ¼ pound.
Base, 100 lineal feet, 1 pound.
To put on rafters, joists etc., 3 pounds to 1,000 feet.
To put up studding, 3 pounds to 1,000 feet.
To lap a 6-inch pine floor, 15 pounds to 1,000 feet.

NUMBER OF NAILS TO THE POUND.

6 penny fence, 2 inches	80
8 penny fence, 2½ inches	50
10 penny fence, 3 inches	34
12 penny fence, 3¼ inches	39
3 penny fine, 1 1/3 inches	760
3 penny, 1¼ inches	480
4 penny, 1½ inches	300
5 penny, 1 inch	200
6 penny, 2 inches	160
7 penny, 2¼ inches	128
8 penny, 2½ inches	92
9 penny, 2 inches	72
10 penny, 3 inches	60
12 penny, 3¼ inches	44
16 penny, 3½ inches	32
20 penny, 4 inches	24
30 penny, 4¼ inches	18
40 penny, 5 inches	14
50 penny, 5½ inches	12

PART XVI

World and State Geography Maps, etc.

RALPH S. TARR, B. S.
Author and Teacher
Famous Geographer and Scientist

THE WORLD.

Form and Size of the Earth.—In form the Earth is an oblate spheroid—very nearly a globe. Circumference, 24,900 miles. Diameter: Equatorial, 7,926 miles: polar, 7,899 miles; mean, 7,912.5. Area of surface, 196,940,400 square miles; volume, 259,880 million cubic miles; mean density, 5.6. Total area within Arctic and Antarctic regions, 16,464,700 square miles; temperate regions, 102,244,654 square miles; within the Tropics, 78,231,046 square miles.

Land area of the world, 54,807,420 square miles—assuming that the unexplored Arctic regions comprise 250,000 square miles of land, and the Antarctic Continent an extent of 2,500,000 square miles within the Arctic Circle. Largest land area—29,450,000 square miles, or three-fifths of total land surface—lies within the most habitable portions of the earth, the temperate regions; land area of Tropics, 19,400,000 square miles. Strictly speaking, the land surface consists of two great continental land masses—Western Continent and Eastern Continent—and Australia, an Island-Continent; more general division is into six continents or grand divisions: North America, South America, Europe, Asia, Africa, and Australia. Geographically Europe is not a grand division, but a peninsula of Asia, and with the latter forms the largest continuous mass of land, hence the title Eurasia, derived from Europe-Asia. In extent the grand divisions of the Eastern Continent are all greatest from east to west, those of the Western Continent from north to south.

Water.—The great expanse of water upon the earth's surface is grouped in five basins: Atlantic, Pacific, Indian, Arctic, and Antarctic oceans. Area of oceans and inland seas connected with them, 142,132,980 square miles, or 72 per cent of the total surface of the earth. Proportion of land and water, 2.59 square miles of water to every square mile of land. Distribution of land and water extremely unequal—about three-fifths of the water south and two-thirds of the land north of equator. Average depth of ocean 12,900 feet, or about six times the average height of land. Greatest depth ever sounded, 27,930 feet. Supposed depth of 83 per cent, or 114,000,000 square miles of total ocean area, over 6,000 feet.

Divisions of Water.—Area of Arctic Ocean estimated at 4,632,000 square miles, or 2.3 per cent of surface of globe. Drainage area large; comprises 5,772,000 square miles of mainland of America and Eurasia. Atlantic Ocean embraces an area of 34,301,400 square miles, or nearly one-fourth the total water area of the globe. In extent Atlantic greatest from north to south; length 9,000 miles, average width only 3,600 miles; greatest depth, "International Deep," off St. Thomas Islands, West Indies, 27,366 feet. Owing to unusual number of indentations Atlantic has greatest extent of coast line, and is commercially most important of the great oceans. Indian Ocean occupies an area of 28,615,600 square miles, very nearly one-fifth the total water area. Width, about 6,300 miles; extent of ocean almost equal both ways. Area of Pacific Ocean, 67,699,630 square miles; comprises nearly one-half the total water area. Pacific extends north and south 9,000 miles, east and west under equator, 12,000 miles. Greatest depth sounded, "Tuscarora Deep," north of Japan, 27,930 feet. Pacific Ocean characterized by large number of islands, both continental and oceanic. Area of Antarctic Ocean estimated at 6,010,000 square miles; depth 4,929 feet.

Physical Features.—Viewed broadly in relief, most characteristic features of surface of Eastern Continent great table-lands and lofty mountains, of Western Continent vast plains. The highest mountains, most extensive plains, and greatest depressions in the world belong to the Eastern Continent. Among the Himalayas of Asia are peaks extending 10,000 feet above the line of perpetual snow; its principal table-lands range between 2,500 and 16,000 feet above sea-level, area embraced equaling two-fifths of that of entire Continent; depressions of the Valley of the Jordan and Dead Sea far below sea-level. The vast lowland plains of the Western Continent—alternate forest and prairie—constitute by far the larger part of that Continent. The longest river in the world—the Mississippi with its affluent, the Missouri—and likewise the largest—the Amazon—as regards volume and extent of basin, belong to the Western Continent. The great fresh-water lakes or seas of the American Continent contain one-third of all the fresh water of the globe, and are without a parallel; the largest, Lake Superior, is the largest body of fresh water in the world.

Climates all belong to one of two classes—maritime and continental—according to nearness or distance of the sea. Average temperature primarily dependent upon latitude and altitude, and with influence of sea most important factor in determining and modifying climate. Climate of Western Continent slightly colder in corresponding latitudes than that of Eastern Continent, especially so in North America; Western also for most part moister—particularly in Tropics amount of rainfall generally far greater than in corresponding regions of Old World. Climate of Hawaii excellent example of insular climates; range throughout year does not exceed 5 or 6 deg. Verkholansk, Siberia—pole of cold for Asiatic Continent—an extreme continental climate; winter temperature sinks to 56 deg. below; summer, 60 deg.; annual range for year, 116 deg. Rainfall very unevenly distributed throughout the world; generally speaking more abundant in warm than cold countries, in maritime tracts than in inland regions, and in hilly and mountainous districts than in plains and lowlands. Average annual rainfall varies from 1.3 inches at Cairo, 13.7 Yakutsk, 22.17 Jerusalem, 25 London, 44.76 New York, 115.49 Valdivia, 155.3 Caracas, to 474 inches at Cherrapoonjee, Assam, India—latter has heaviest known rainfall in world, occasionally over 20 feet falling during June. Snow line—lower limit of region of perpetual snow—varies in height with latitude, nearness of sea, etc.; near the Poles snow line at sea-level; at the equator mean altitude of snow line about 16,000 feet.

Population of the World as estimated by Ravenstein—exclusive of Polar regions—1890, 1,487,600,000; average number to a square mile, 31.5. Total number of inhabitants steadily increasing. Geographically population distributed most irregularly; density of grand divisions ranges between 1.4 and 107 to a square mile. Eastern Continent far more densely populated than Western Continent; more than three-fourths of all the inhabitants on the earth are in the Eastern Continent.

Races.—Population of the World grouped in five divisions or classes: Caucasian or white race, Mongolian or yellow, Malayan or brown, Negro or black, and American or red. The white or dominant race numbers about 690,000,000, and now occupies almost the whole of Europe, the greater part of North America and Australasia, and large districts of Southern Africa, South America, and Northern Asia. Mongolian—natives of China, Siberia, Siam, Japan, Korea, etc.—600,000,000; Malayan—found chiefly in Malay islands and peninsula, New Zealand, and Madagascar—35,000,000; Negro—chiefly in Africa, with several millions in United States—150,000,000; American—native Indian tribes—12,000,000; mixed races, 13,000,000.

Languages.—Each country generally occupied by a different nation having its own distinctive language. Number of different languages and dialects throughout the world very great, total exceeds 1,000. Only seven languages, however, employed by more than 50,000,000 people—Chinese, Hindoostani, English, Russian, German, Spanish, French. The greatest number—400,000,000—speak Chinese. Languages chiefly used in international commerce—English, Spanish, French, and German. English most widely used commercially and extending rapidly. Owing to great progress of Spanish-American Republics of South America, Spanish as a commercial language advancing in importance. French generally used in international discussions and diplomatic affairs.

Religions of the world may be grouped in two great classes: Polytheism—a belief in a plurality of gods—and Monotheism—a belief in one god. Principal religions embraced in Polytheism are Brahminism, the national religion of the Hindoos for more than 4,000 years; Buddhism, introduced by Guatama, an Indian prince, 2,500 years ago, now embraces by far the greatest number of adherents of any religion. Monotheism is expressed in three forms: Judaism, Christianity—embracing three great sections, Protestantism, Roman Catholic, and the Greek Church—and Mohammedanism, founded over 1,250 years ago by Mohammed in Arabia. Religious population estimated as follows: Christians, 448,000,000—Protestants, 137,000,000; Roman Catholics, 216,000,000; Greek Churches, 95,000,000; Buddhists, 500,000,000; Mohammedans, 200,000,000; Brahminists, 172,000,000; Jews, 7,000,000; pagans and others, 173,000,000.

Governments.—The inhabitants of the World are practically grouped under three forms of government—tribal, monarchical, and republican. The barbarous or savage races usually live under tribal form; civilized nations under monarchical—either absolute or limited—or republican form. The nations of the Eastern Continent are almost all under monarchical forms, and, with but few exceptions, all countries of the Western Continent are republics.

NORTH AMERICA.

Historical.—Discovery of North America by Norsemen about 1000, and destruction of settlements by Skrölinger (Eskimo) now generally conceded. Continent undoubtedly visited by other navigators and forgotten previous to rediscovery by Columbus, who reached the Bahamas Oct. 12, 1492. Northern coast of North America discovered by Cabots 1497; coast of Labrador explored by Cortereal 1500; southeastern coast—Florida—discovered by Ponce de Leon 1512; eastern coast explored by Verrazano 1524. Mexico conquered by Cortez 1519-21. California coast explored by Cabrillo 1542; by Drake 1578-79. French settlements established in Canada 1534; English colonies on Atlantic coast early in 17th century; in 1763 former passed to British; latter declared independence in 1776 and at close of War of Revolution—1775-1783—established the Republic of the United States. In 1822 Mexico threw off the Spanish yoke and became a republic. Confederation of Central American States 1824; dissolved 1839. Cuba declared independent of Spain 1898. Panama seceded from Colombia 1903. Important wars: Great Britain with France 1756-59; United States with Great Britain 1775-83 and 1812-15; with Mexico 1846-48; Civil War 1861-65; Spanish-American War 1898.

Area, 9,294,330 square miles—including Greenland, 838,000 square miles; Arctic Archipelago, 502,440; West Indies, 91,078; Newfoundland, 42,730. Greatest distance north to south, 4,500 miles; east to west, 3,100.

Physical Features.—Most characteristic features of continent: Cordilleran Mountain system on west, embracing Rocky, Sierra, and other mountain ranges (Mt. McKinley 20,464 feet, and Orizaba 18,500 feet, volcanic peaks in Alaska and Mexico, highest elevations); Appalachian system on east—often called Alleghany from chief range (Mitchell's Peak, North Carolina, 6,688 feet, highest point); and Great Central Plain, extending from Arctic regions to Gulf of Mexico. Principal rivers: Mississippi and tributaries; St. Lawrence, with Great Lakes, belonging to Atlantic basin; Columbia and Yukon, Pacific basin; Mackenzie, Arctic basin. Coast-line 24,500 miles; eastern coast-line, especially in north, much more indented than western.

Climate of North America slightly colder than that of grand divisions in corresponding latitudes in Eastern Continent; rainfall for most part also greater. Climate of eastern coast of North America colder than western, also subject to greater extremes of heat and cold at opposite seasons. Arctic regions and Labrador extremely cold; central section within the temperate zone characterized by cold winters and hot summers; climate of extreme south tropical; lowlands of Mexico and Central America, and West Indies, hot and unhealthful; elevated interiors temperate and equable. Greatest rainfall in the southeast and along the northern portion of Pacific coast; scant rainfall in Great Basin.

Forests are of vast extent; timber supply one of most valuable commercial products of North America. In the north conifers prevail; forests of western mountains remarkable for their giant conifers (sequoia, Douglas fir, etc.) Variety of deciduous trees very great; included are oak—of which there are 45 varieties in North America—maple, beech, birch, hickory, walnut, etc. In the warmer temperate regions live oak, pine, and palmetto also abound. Forests of tropical regions rich in mahogany, logwood, lignum-vitæ, and other rare and valuable trees.

Agriculture.—Vegetation in extreme north scanty. Central and southern sections fertile, and plant life in general varied and luxuriant. Characteristic differences between plants of America and those of Eastern Continent, slight in high northerly latitudes, become marked with every advance toward south. Indian corn, or maize, the potato, and manioc—a tuber found in Central America—native food plants of North America. Tobacco plant also indigenous to the country. Many of most widely cultivated plants and trees, however, introduced from eastern half of globe. Corn, wheat, oats, barley, potatoes, and hay extensively cultivated in central and northern sections; in warm temperate regions sugar cane, cotton, tobacco, and rice most important; tropical regions, sugar cane, sweet potatoes, indigo, tobacco, coffee, and cacao.

Minerals.—North America unsurpassed in variety and richness of mineral products. Country west of Rocky Mountains one of the richest gold regions in the world; extensive deposits of gold also worked in Mexico. Silver widely distributed and extensively mined in Western United States and Mexico. Richest deposits of copper in the world in Montana and on shores of Lake Superior. United States contains largest and most valuable coal deposits; Canadian coal fields also valuable. Iron ores of United States and British North America of vast importance. Petroleum wells of Appalachian system most productive and valuable in the world. Lead, antimony, quicksilver, salt, cobalt, nickel, zinc, platinum, and sulphur mined. Numerous varieties of excellent building stone, beautiful marbles, and fine roofing slate also abundant.

Population 1895 (estimated), 97,270,000. Inhabitants comprise whites, chiefly European settlers and their descendants; negroes, descendants of slaves introduced from Africa; native Americans, Indians; and mixed races. Origin of prehistoric inhabitants (cave dwellers, mound builders, etc.) variously given. Natives now number only about 500,000; negroes on Continent and in West Indies 12,800,000.

Governments.—Politically Continent divided among 8 independent republics—United States, Mexico, Guatemala, Honduras, Salvador, Nicaragua, Costa Rica, and Panama—and two English colonies—Dominion of Canada and British Honduras. The principal continental islands include the independent State of Cuba; Republics of Haiti and Santo Domingo; United States Territory, Porto Rico; the English colonies Newfoundland, Jamaica, and Bahama; and the Danish dependency, Greenland. British, Dutch, French, and Danish colonies exist among the minor islands.

UNITED STATES.

Historical.—Region probably visited by Northmen about 1000; by the Cabots, 1497-8; explorations made by Ponce de Leon, 1512; Verrazano, 1524; De Soto, 1539-42, etc. Earliest settlements made by Spaniards at St. Augustine, Florida, 1565; by English at Jamestown, Virginia, 1607; landing of Pilgrims at Plymouth, 1620; mouth of Mississippi reached by La Salle, 1682; river and surrounding country taken possession of in name of King of France. French and Indian war, 1754-63. Stamp Act passed by English Parliament, 1765, taxes, 1767, and Boston Port Bill, 1774, lead to Revolution, 1775, and the Declaration of Independence, 1776. Independence recognized by France, 1778; by Great Britain, 1783. Constitution adopted, 1787; new government inaugurated, 1789; first capital, New York; removed to Philadelphia, 1790; to Washington, 1800. Louisiana purchased from France, 1803; Florida ceded by Spain, 1819; Texas annexed, 1845; Mexican cession, 1848; Gadsden Purchase, 1853; Alaska Purchase, 1867; Hawaiian Islands annexed, 1898; Porto Rico, Guam, and Philippine Islands ceded by Spain, 1898. Historical wars after Revolution include War of 1812 with Great Britain; Mexican, 1846-8; Civil, 1861-5, and Spanish-American, 1898.

Area, 1900, according to census office: United States, 2,970,230 square miles; Alaska, 590,884 square miles; Hawaii, 6,449 square miles; Philippine Islands, 119,542 square miles; Porto Rico, 3,435 square miles; Guam, 201 square miles; Samoa, 81 square miles; Isle of Pines (U. S. Land Report), 882 square miles. Total, 3,691,704 square miles. Extreme length United States, Atlantic to Pacific, 2,780 miles; breadth, 1,600.

Public Domain, Etc.—Lands held by Government for settlers under settlement laws, exclusive of Alaska, 1900, 557,643,120 acres; surveyed, 314,590,965; unsurveyed, 243,052,155. Area of public lands in Alaska, 359,492,760; all unsurveyed. Lands taken up under Homestead Act, 1900, 8,478,409 acres; disposed for cash under various acts, 1,178,982. Public forests, exclusive of Alaska, comprised in 38 reservations; estimated area, 46,424,809 acres; California, 8,853,129 acres; Washington, 7,545,600.

Physical Features.—Most prominent natural features: The Atlantic Coast Plain, merging into the Gulf Coast Plain and Valley of the Mississippi; Appalachian Mountain System between Atlantic Coast Plain and Mississippi Valley (Mt. Mitchell, 6,688 feet, highest elevation); Great Central Plain

NORTH AMERICA.
SCALE OF STATUTE MILES.
0 100 200 300 400 500 600 700 800 900 1,000
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Longitude West from Greenwich.
ARCTIC OCEAN
ATLANTIC OCEAN
PACIFIC OCEAN
DOMINION OF CANADA
UNITED STATES
MEXICO
GULF OF MEXICO
CENTRAL AMERICA
WEST INDIES
GREENLAND
HUDSON BAY
BAFFIN BAY
ASIA
ALASKA
A 165° B 155° C 145° D 135° E 125° F 115° G 105° H 95° I 85° J 75° K 65° L 55° M 45° N 35° O 25° P

drained by Mississippi—most important river of North America—and the Gulf of Mexico; the Pacific Highlands, including Rocky Mountains (Sierra Blanca, 14,464 feet), the Great Basin—a dry, arid region without an outlet to either ocean—Great Salt Lake, and Sierra Nevada (Mt. Whitney, 14,898 feet); and the Pacific Region. Principal rivers of eastern section: Connecticut, Hudson, Delaware, Susquehanna, Potomac, and James; chief tributaries of Mississippi: Missouri, Ohio, Arkansas, and Red; largest rivers west of Rocky Mountains: Columbia, Sacramento, and Colorado; Rio Grande forms boundary between Texas and Mexico. Total coast line (straight), 5,715 miles; Pacific, 1,810; Atlantic, 2,349; Gulf of Mexico, 1,556; shore line of Great Lakes, 3,450 miles.

Forests, exclusive of Alaskan, cover areas aggregating nearly 500,000,000 acres; seven-tenths on Atlantic side. Eastern section contains large forests both of deciduous and evergreen trees; included are sugar maple, red oak, white oak, and many other species of oak, chestnut, birch, hickory, and black walnut, with beech, linden, elm, and locust; characteristic of the South are live-oak, long-leaf pine, magnolia, and palmetto. Conifers include valuable pines, cypress, spruce, hemlock, cedar, and larch. The more limited forest areas of the Rocky Mountain ranges afford conifers, aspen, black and white oak, etc. Magnificent forests of Washington, Oregon, and California unrivaled; trees, chiefly conifers, include Douglas fir, yellow pine, sugar pine, and the valuable redwood. Standing timber in United States estimated at 2,300 billion feet, B. M.; annual cut, 40 billion feet; conifers constitute three-fourths; oak and other hardwoods remainder

Climate varied, owing to vast extent of territory, but temperate throughout the greater part of country; in general, subject to sudden and extreme changes. Extremes of heat and cold more marked on Atlantic Seaboard and Great Central Plain; latter open to cold winds from Arctic regions; in extreme south, and along shores of Gulf of Mexico, heat of summer intense; winters mild; most equable climate that of Pacific Coast. Mean annual temperature, 53 degrees. Rainfall in east and Mississippi Valley abundant and evenly distributed; heaviest along Gulf of Mexico and the Atlantic; ranges from 25 to 63 inches yearly. Pacific Coast characterized by wet and dry seasons; rainfall increases from south to north; heaviest in northwest; ranges from 2.9 to 86.3 inches yearly. Plateau of west noted for dry west winds and lack of rain.

Agriculture leads all other industries in importance; employs nearly one-half the labor of the country; vast areas naturally adapted to pursuit. Staple productions: Cereals, cotton, tobacco, sugar. Soil of eastern half of country, especially in Mississippi Valley, remarkably rich; in northern portion of valley extensive crops of Indian corn, wheat, oats, potatoes, orchard fruits, etc., are grown; in southern, cotton, sugar cane, tobacco, and rice. Western States have made notable advance in agriculture; cultivated areas yield abundantly; arid lands rapidly being reclaimed through irrigation. Fruits common to temperate and semi-tropical zones are cultivated extensively in Pacific, Central, and Southern States. Area under farms, 1890, 623,218,619 acres; improved, 357,616,755. Farm products, 1900: Corn, 2,105,102,516 bushels; wheat, 522,229,505 bushels; rye, 23,995,927 bushels; oats, 809,125,989 bushels; barley, 58,925,833 bushels; buckwheat, 9,566,966 bushels; hops, 1899, 235,300 bales; flaxseed, 1899, 20,086,000 bushels; apples, 1898, 27,681,000 barrels; cranberries, 875,000 bushels; peanuts, 2,600,000 bushels, cotton, 1900, 9,439,559 bales; hay, 50,110,906 tons; potatoes, 210,926,897 bushels; cane-sugar, 622,476,400 pounds; molasses, 46,502,876 gallons; tobacco, used in manufacture, 419,186,415 pounds.

Live Stock.—Rearing of live stock an important industry in almost every State; western sections especially adapted to cattle, sheep, and swine. Over 4,500,000 square miles devoted to cattle; vast numbers annually slaughtered for the markets. Enormous quantities of butter, cheese, and wool produced. Number of sheep, 1900, 61,605,811; wool clip, 288,634,621 pounds. Value of all farm animals June 1, 1900, $2,981,722,945. Value of animals and fowls exported, 1900, $43,585,031; butter, $3,113,509; cheese, $4,943,609; fresh beef, $29,613,830; total beef products, $42,170,407; hog products, $111,529,417

Fisheries extremely valuable. Coast fisheries of New England and Middle Atlantic States lead in importance; Pacific Coast fisheries, including Alaska, rank next; those of South Atlantic, Gulf, and Great Lakes States also important. Value of all products, 1898, $45,199,136; number engaged in industry, 174,303; vessels, not including boats, 6,385; tonnage, 174,303.

Manufactures varied and conducted on an extensive scale. Country second only to England in textile industries; New England chief seat of cotton industry; recent marked development in southern section near cotton fields; total number of spindles, 1900-01, 20,200,000; Northern States, 14,700,000; Southern, 5,500,000. Woolen manufactures largely confined to North Atlantic States; silk to New Jersey, New York, Connecticut, and Pennsylvania; number silk factories, 1900, 483. United States leads the world in manufacture of iron and steel; pig iron produced, 1900, 13,789,242 tons; rolled iron and steel, 1900, 9,487,443 tons. Tin plate manufacture begun 1873; in 1898 works numbered 69; product in 1900, 677,969,600 pounds; imports marked by steady and rapid decline: in 1890 imports were 680,060,925 pounds, value $20,928,150; in 1900, 147,963,804 pounds, value $4,799,796. Country excels in manufacture of machinery, electrical appliances, and agricultural implements; leads all others in production of flour. Number distilleries in operation, 1900-01, 3,745; production, 81,929,713 gallons; breweries, 1898, 1,845; production, 37,529,339 barrels; domestic wines, 22,213,633 gallons. Among other important industries are lumber, leather, glassware, pottery, etc.

Commerce of vast extent and importance. In foreign commerce United States surpassed only by Great Britain and Germany. In 1900 balance of trade in favor of United States; total exports nearly twice as great as total imports; exports of domestic manufacture greater than imports of foreign manufacture. Exports, $1,465,380,919: Agricultural products, $940,246,488; manufactures, $395,144,030; mining products, $40,416,597. Value of imports, $880,421,056. Sugar, coffee, chemicals, hides, cotton, and silk leading imports. Trade with United Kingdom was $754,058,726; with Germany, $284,648,574; with France, $159,720,581; British North America, $155,495,951. Of imports into United States 12.9 per cent carried in American vessels; of exports 7.1 per cent.

Minerals.—Total value of products, 1900, $1,062,605,587; metallic products, $549,934,370; non-metallic, $516,671,217 Gold, 3,829,897 fine ounces, $79,171,000; Colorado and California lead; silver, 57,647,000 ounces, $35,741,000; Colorado and Montana lead; iron ore, 27,553,161 long tons; chief mining centers, Michigan, Minnesota, and Alabama; copper 606,117,166 pounds; United States produces more than half the product of the world; richest districts in Montana and Michigan; coal mined, 269,881,827 tons, Pennsylvania most prominent producer; petroleum, 63,362,704 barrels; chief fields lie in Pennsylvania, New York, and West Virginia; salt product, 20,869,342 barrels. Other important minerals are lead, zinc, quicksilver, building stones, etc.

Population.—Immigration to colonies, 1624, 9,000; population, 1733, 750,000; United States, 1800, 5,308,483; 1850, 23,191,876; 1890, 62,622,250. Population, 1900 (including Alaska and Hawaii), 76,303,387. Male, 39,059,242; female, 37,244,145; native, 65,843,302; foreign, 10,460,085; white, 66,990,802; colored, 9,312,585—Africans, 8,840,789; Chinese, 119,050; Japanese, 85,986; Indians, 226,760. Number of immigrants, 1821 to June 30, 1900, 19,023,356.

Railways, Etc.—Steam power first employed in railway service, 1829. Number of miles in operation 1830, 23; 1850, 9,021; 1870, 52,922; 1880, 93,296; 1890, 166,698; 1900, 193,346; miles of line to each 100 square miles of territory, 6.51; miles per 10,000 inhabitants, 25.41. Capital invested, $11,491,034,960; net earnings, $557,622,217. Western Union telegraph lines, 1901, 972,766 miles of wire; American Telephone Co., 1,354,202 miles of wire—capital invested 1897, $25,886,300; long distance telephone, $20,000,000 invested.

Defense.—Military and naval service voluntary. In 1900 the regular army had 2,486 officers and 65,669 enlisted men. In addition, the State militia numbered 5,760 officers and 45,298 enlisted men. Number enrolled in various wars: In Revolution number actually engaged in military service probably about 250,000; an approximate estimate, however, places it at 376,771; in War of 1812, 471,622; in Mexican War, 116,321; in Civil War, 2,526,163; in Spanish-American War, 274,717 In 1901 navy comprised 2,066 officers, 24,593 enlisted men. Number of vessels regular navy, 252; including auxiliary navy, 307.

Government.—Executive power vested in President—elected for a term of four years—assisted by Cabinet of eight members; Legislative in Congress consisting of Senate and House of Representatives. Each State represented in Senate by two Senators elected by Legislature of State; in House of Representatives by members elected directly by people; number proportioned to population of State. Judicial includes Supreme, Circuit, and District courts, and Court of Claims. Supreme Court consists of Chief Justice and eight associate justices.

Longitude West from Greenwich.
DOMINION OF CANADA
UNITED STATES
MEXICO
PACIFIC OCEAN
ATLANTIC OCEAN
GULF OF MEXICO
GULF OF CALIFORNIA
HUDSON BAY
Edmonton
Battleford
Winnipeg
Lake Winnipegosis
Lake Manitoba
Saskatchewan River
Severn River
Nelson River
WINNIPEG LAKE
Regina
Calgary
Vancouver
Victoria
Strait of Juan de Fuca
Port Townsend
Seattle
Tacoma
Olympia
Spokane
Portland
Walla Walla
Salem
Columbia R.
Kootenay Lake
Flathead Lake
Great Falls
Ft. Benton
Missouri
Helena
Butte
Yellowstone R.
Miles City
Livingston
Billings
Bozeman
Mt. Rainier
Mt. St. Helens
Mt. Hood
Mt. Shasta
Mt. Hamilton
Mt. Whitney
Mt. Diablo
Mt. Tamalpais
Mt. Taylor
Mt. Graham
Mt. Baldy
Mt. Wilson
Mt. San Jacinto
Mt. San Antonio
Mt. Pinos
Mt. Diablo
Mt. Tamalpais
Mt. Taylor
Mt. Graham
Mt. Baldy
Mt. Wilson
Mt. San Jacinto
Mt. San Antonio
Mt. Pinos
Buford
Devils Lake
Grand Forks
Crookston
Duluth
Lake of the Woods
Lake Superior
Marquette
Sault de Ste. Marie
Ottawa River
Montreal
Quebec
Fredericton
Portland
Boston
Albany
Buffalo
Toronto
Lake Ontario
Lake Erie
Lake Huron
Lake Michigan
Lake St. Clair
Detroit
Cleveland
Pittsburg
Philadelphia
Atlantic City
Delaware Bay
Chesapeake Bay
Norfolk
Richmond
Raleigh
Wilmington
Charleston
Savannah
Brunswick
Jacksonville
Galveston
Tampa
Key West
Havana
Bahama Islands
Nassau
Cuba
Mexico
Monterey
Saltillo
Chihuahua
Durango
Mazatlan
Guaymas
Hermosillo
Pt. Eugenia
Ciudad Victoria
Tropic of Cancer
Zacatecas
Ciudad Porfirio Diaz
Ciudad Juarez
Laredo
Corpus Christi
Brownsville
Rio Grande
Pecos
Colorado
Red River
Arkansas River
Missouri River
Mississippi River
Ohio River
Platte River
Yellowstone River
Snake River
Columbia River
Sacramento River
San Joaquin River
Colorado River
Gila River
Rio Grande
Pecos River
Brazos River

MAINE. "Pine Tree State."

Signifies "The Main" or "Mainland."

Historical.—The most northeasterly of the United States and the New England group. Coast and rivers explored by French, 1604 and 1605. Earliest settlement—by English—made 1607, at mouth of the Kennebec. Gorgiana (York) chartered 1624. Territory first called Acadia. Known as "District of Maine," 1652 to 1819; governed by Massachusetts. Long-standing dispute regarding northeast boundary settled in 1842, by Webster-Ashburton Treaty. "Maine Law," prohibiting manufacture and sale of intoxicating liquors, passed 1851, permanently 1858. Tenth State to enter the Union; admitted March 15, 1820.

Area.—Total area, 33,040 square miles or 19,132,800 acres; land, 29,895 square miles; water, 3,145 square miles; extreme length, 300 miles; breadth, 210. About equal in area to all other New England States combined. Counties number 16. Mt. Desert Island, noted for its picturesque scenery, contains 60,000 acres.

Physical Features.—Atlantic coast line, 278 miles; including indentations, 2,486. Over 1,500 lakes cover one-tenth area of State; elevation 1,000 to 1,500 feet; source of magnificent water-power; Moosehead, the largest, area 120 square miles. Watershed extends east and west 150 miles from coast. Highest elevation, Mt. Katahdin, 5,200 feet. Only about one-third of State in south and in valley of St. John in north below 800 feet. St. John River drains 6,000,000 acres. Penobscot, the largest, estimated length 300 miles; Kennebec, 150 miles. State contains numerous summer resorts. Primeval forest covers three-fourths of State. Unrivaled scenery, climate, hunting, and fishing afford attractions for all classes of tourists.

Forests.—Chiefly pine, fir, spruce, and hemlock. Cedar, beech, birch, hard maple, and black and white ash abundant. Over 23,000 square miles of forest, with 5,500,000,000 feet of timber, annual cut of spruce over 500,000,000 feet, 300,000,000 feet for manufacture of paper and pulp. Spruce-bearing area averages 6,000 square miles. Pulp industry rapidly increasing. State third in value of paper and pulp products.

Climate.—Severe frosts extend through half the year. Summers short; great depth of snow prevents freezing of ground; vegetation in spring rapid. Mean annual rainfall at Portland, 42.3 inches; mean annual temperature, 43.3 deg.; highest, 97.0 deg.; lowest, 17.0 deg. below.

Game.—Deer found in each of the 16 counties; herds frequently destroy crops; number killed, 1896, 10,000; no apparent decrease. Vast extent of forests renders it difficult to protect game in summer. Number of moose killed by visiting hunters, 1896, exceeded all previous years. Caribou rapidly approaching extinction. Streams famed for excellent trout. Inland cultivation of trout, salmon, white perch, black bass, etc., important.

Live Stock.—One of the foremost Eastern States in raising live stock, especially horses. Value of farm animals, 1900, $17,106,034. Number and value of live stock, June 1, 1900: Horses, 106,299, $7,058,989; sheep, 420,116, $1,116,483; milch cows, 173,592, $5,060,048; other cattle, 165,255, $2,523,497; swine, 79,018, $516,015. Wool clip, 1901, 1,509,594 pounds, washed and unwashed.

Fisheries.—Maine ranks second in fisheries. Investment in industry, 1898, $4,013,053; value of products, 1898, $2,654,919; lobsters lead, value $992,855; herring, $174,013; clams, fresh and salted, $323,453; cod, same, $314,255; smoked herring, $63,000; salt, $26,159; smelts, $139,345; swordfish, $44,395; 1898, fisheries employed 16,954 persons. The herring industry is the most extensive and valuable. Eastport and Lubec are the chief business centers. In 1895, 14,647 hogsheads, or 14,647,000 pounds, were used for smoking and pickling; in preparing sardines, other canned herring, and Russian sardines, 36,496 hogsheads, or 36,496,000 pounds were used. Sardines first canned at Eastport, 1875; State has 78 sardine factories, employing 6,829 hands; capital invested, $914,850.

Agriculture.—Hay and potato crops of great excellence and quantity; both afford a large surplus for export; maize, winter wheat, and oats are grown. Production and value of cereals, 1900: Corn, 440,244 bushels, value $242,134; wheat, 40,755 bushels, $36,680; oats, 5,257,612 bushels, $1,997,893; hay, 937,774 acres, 843,997 tons, $10,929,761; buckwheat, 719,760 bushels, $352,682; potatoes, 6,200,208 bushels, $3,038,102. Apples, 1898, 1,210,000 barrels. Aggregate value of blueberries and huckleberries gathered from waste land and exported in fresh and canned state, very large.

Manufactures.—Chiefly cotton goods, lumber, boots and shoes, woolen and leather goods, farm implements, etc. Value of products, 1900, $127,361,485. Number of establishments reporting, 6,702; capital, $122,918,826; employed 78,145 persons; cost of material used, $68,863,408. Output of pulp manufactories in 1900, valued at $13,223,275; cotton goods, $14,631,086; lumber and timber products, $13,489,401; woolen goods, $13,412,784. Stands eighth in value of ships built, $3,777,059. Tanning and finishing of leather one of the chief industries. Output of tanneries, $2,451,713; fish canning, $4,779,733.

Quarries.—Maine ranks second in the production of granite; annual product, about 7,000,000 cubic feet; in 1899, the granite product was worth $1,321,082. In 1900 the total value was $1,698,605; sold in rough state, $286,781; for building purposes, $887,786; cemetery purposes, $93,380; paving blocks, $145,960; curbing, $96,271, macadam, $5,012. Ranks fourth in slate. Slate for roofing, 21,771 squares, valued at $103,949; total value, $177,342. Total value of limestone, $691,312; value in 1898 was $1,283,468; decrease due to business changes. Feldspar quarries operated about 20 years. Value of all stone products, 1900, $2,500,000. The value of granite quarried in 1900 was the highest in eight years. Massachusetts exceeded the output by $130,082.

Population.—Ranked eleventh, in 1790; twelfth, in 1820; sixteenth, in 1850; thirtieth, in 1900. Total population, 1790, 96,540, 1820, 298,335; 1850, 583,169; 1890, 661,086; 1900, 694,466. Male, 350,995; female, 343,471. Native, 601,136; foreign, 93,330; white, 692,226; colored, 2,240; Africans, 1,319; Chinese, 119; Japanese, 4; Indians, 798.

Cities.—*Portland*, metropolis and seaport; settled by the English, 1632. Prominent railroad and manufacturing center; valuable coasting trade and fisheries; population, 1900, 50,145. *Lewiston*, second in size; fine water power; $9,000,000 invested in manufactures; population, 1900, 23,761. *Bangor*, port of entry and lumber depot; head of steam navigation on Penobscot River; population, 21,850. *Biddeford*, on Saco River; has important manufactures and large lumber trade; population, 16,145. *Augusta*, the capital; population, 11,683.

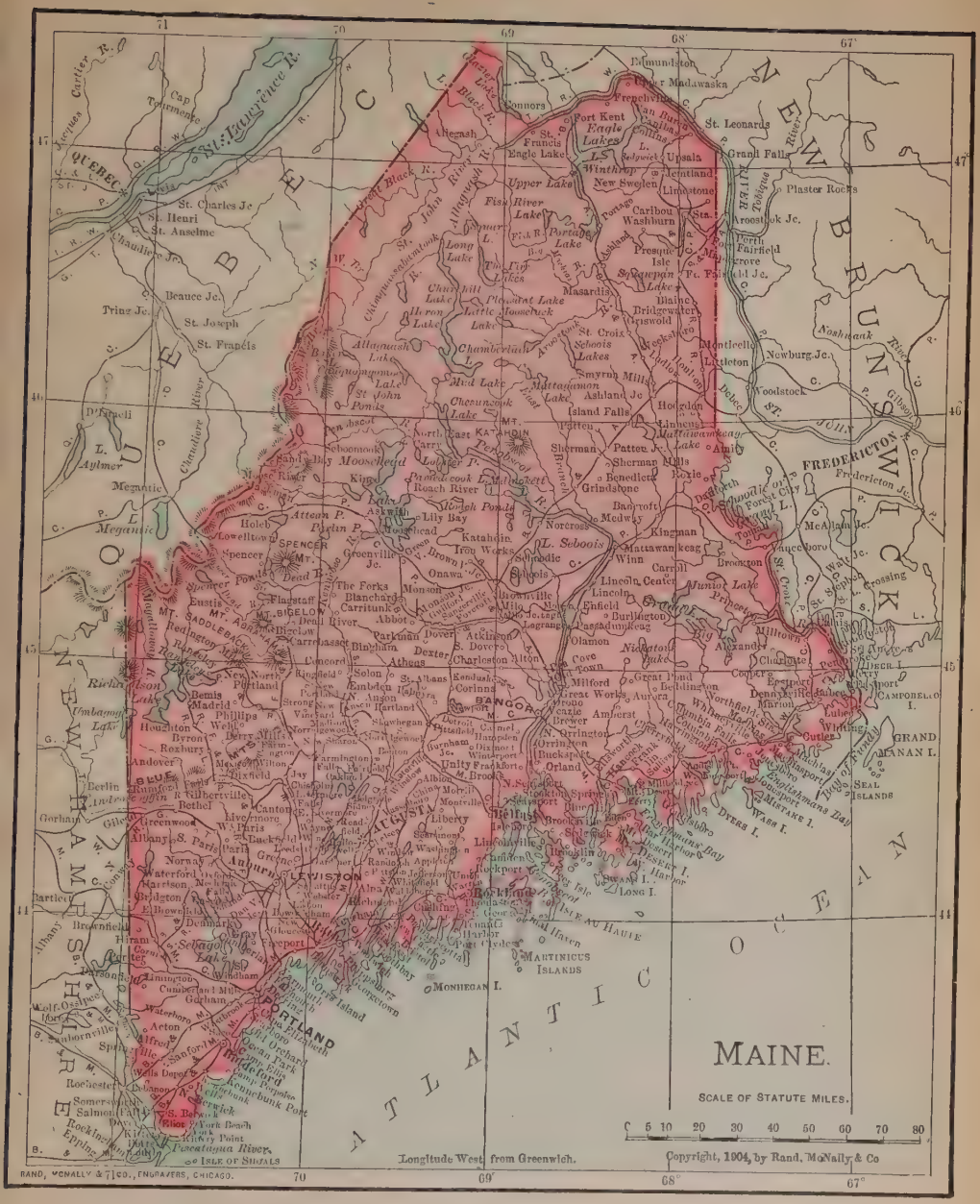
Railways.—In 1840 there were 11 miles of road; in 1850, 245; 1860, 472; 1870, 786; 1880, 1,005; 1890, 1,383; 1896, 1,718.53. Total number of passengers carried, 5,706,615; tons of freight, 5,229,084; 25,000 persons receiving entire support from railroad employment. Mileage, July, 1900, 1,915.24, averaging 6.41 miles to each 100 square miles.

Education.—Public school enrollment, 1900, 170,860; school age, 5-21; compulsory school age, 8-15; expenditure, $1,712,795; text-books furnished; state has 154 public high schools; private secondary schools, 33; number of public school buildings, 1900, was 3,995; estimated total value of school property, $4,699,475. Bowdoin College, Brunswick (Congregational), founded 1794 (Longfellow and Hawthorne graduated here, 1825); Colby College, Waterville (Baptist), established 1820; Bangor Theological Seminary; Wesleyan Seminary, Kents Hill and Westbrook Seminary, Deering (for women); Bates College, Lewiston, founded 1863; University of Maine, Orono, (State), founded 1867.

Political.—State elections, second Monday in September; congressional and presidential, Tuesday after first Monday in November; number of Senators, 31; Representatives, 151; sessions, biennial, in odd-numbered years, meeting first Wednesday in January; limit of session, none; term of Senators and Representatives, 2 years. Number of electoral votes, 6. Voters must be actual citizens, residents of State, county, town, and precinct 3 months; registration required; ballot reform; women, paupers, and untaxed Indians excluded.

Legal Holidays.—January 1, February 22, May 30, July 4, first Monday in September, Thanksgiving, December 25.

Legal.—Legal rate of interest, 6 per cent; by contract, rate unlimited. Statutes of limitation: Judgments, witnessed notes, personal action, 20 years; other debts, 6 years. Redemption from tax sale: Residents, 2 years after collector's return; non-residents, 18 months after sale.


MAINE.
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60 70 80
Longitude West from Greenwich.
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QUEBEC
NEW BRUNSWICK
ATLANTIC OCEAN
St. Lawrence R.
Chaudiere R.
Penobscot R.
Kennebec R.
Androscoggin R.
Saco R.
Aroostook R.
St. John R.
Allagash Lake
Chamberlain L.
Eagle Lake
Fish River Lake
Long Lake
Square Lake
Portage Lake
Upper Lake
Mud Lake
Cheesuncook Lake
Moosehead Lake
Sebec Lake
Schoodic Lakes
Grand Lake
Matagamon Lake
Mattawamkeag Lake
Seboomook Lake
Chesuncook Lake
Pemadumcook Lake
Millinocket Lake
Chamberlain Lake
Allagash Lake
Square Lake
Eagle Lake
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Mud Lake
Schoodic Lakes
Grand Lake
Matagamon Lake
Mattawamkeag Lake
Moosehead Lake
Sebec Lake
Pemadumcook Lake
Millinocket Lake
Mt. Katahdin
Mt. Saddleback
Mt. Abraham
Mt. Bigelow
Mt. Kineo
Mt. Desert I.
Monhegan I.
Matinicus Islands
Isle of Shoals
Grand Manan I.
Seal Islands
Machias
Eastport
Calais
Bangor
Portland
Lewiston
Augusta
Auburn
Waterville
Rockland
Belfast
Bath
Brunswick
Biddeford
Saco
Old Orchard
Kennebunk
Kittery
York Beach
Ogunquit
Wells
Sanford
Alfred
Acton
Limington
Cornish
Hiram
Brownfield
Fryeburg
Conway
Bridgton
Harrison
Naples
Casco
Gorham
Windham
Westbrook
Falmouth
Cumberland
Yarmouth
Freeport
New Gloucester
Lisbon
Litchfield
Gardiner
Hallowell
Farmingdale
Winthrop
Monmouth
Leeds
Livermore
Jay
Wilton
Farmington
Strong
Phillips
Rangeley
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Umbagog Lake
Megantic
Lake Aylmer
St. Henri
St. Anselme
St. Charles Jc.
Beauce Jc.
St. Joseph
St. Francis
Trinity Jc.
Chaudiere Jc.
Lac Etchemin
Dr'Israeli
Megantic
Lowelltown
Holeb
Attean P.
Parlin P.
Spencer
Spencer Pond
Dead R.
Greenville
Greenville Jc.
Onawa
Monson
The Forks
Blanchard
Carritunk
Abbot
Parkman
Dover
Atkinson
Dexter
Dover
Foxcroft
Sangerville
Milo
Brownville
Brownville Jc.
Katahdin Iron Works
Lily Bay
Roach River
Norcross
Seboomook
Schoodic
Matagamon
Mattawamkeag
Winn
Lincoln
Lincoln Center
Enfield
Passadumkeag
Olamon
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Bucksport
Winterport
Frankfort
Prospect
Stockton Springs
Searsport
Belfast
Northport
Camden
Rockport
Rockland
Thomaston
Owls Head
Tenants Harbor
Port Clyde
Friendship
Waldoboro
Damariscotta
Newcastle
Wiscasset
Bath
Brunswick
Topsham
Lisbon Falls
Lewiston
Auburn
Mechanic Falls
Poland
Minot
Hebron
Oxford
Norway
South Paris
Paris
Buckfield
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Canton
Turner
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Mechanic Falls
Poland
Minot
Hebron
Oxford
Norway
South Paris
Paris
Buckfield
Hartford
Canton
Turner
Livermore Falls

VERMONT. Ver-mont'. "Green Mountain State."

From French words "vert," green, and "mont," mountain.

Historical.—One of the New England States. Admitted to the Union March 4, 1791; first State admitted after the adoption of the United States Constitution. First settlement made by emigrants from Massachusetts at Fort Dummer, near site of Brattleboro, 1724. "Green Mountain Boys," under Ethan Allen, bore an active part in Revolutionary War. First State Constitution adopted 1777, second 1786, third 1791; amended 1793, 1836, 1850, and 1870.

Area.—Total area, 9,565 square miles; land, 9,135; water, 430; length, 158 miles; breadth, 35 to 85 miles. Counties, 14.

Physical Features.—Green Mountains traverse the State centrally from north to south; highest elevation, Mt. Mansfield, 4,430 feet. Over 100 miles of frontage on Lake Champlain; noted for its scenery and many summer resorts. Connecticut River separates Vermont from New Hampshire; drains 3,500 square miles.

Climate.—Winters long and usually severe; summers short; air pure and cool. Mean annual rainfall at Burlington, 32.9 inches; mean annual temperature, 45.3 deg.; highest, 97 deg.; lowest, 25 deg. below.

Agriculture.—Agriculture chief occupation of State; main products hay, oats, potatoes, and corn. Excels in dairy and fruit farming. State exceeds all others in the production of maple sugar. Productions and values, 1900, oats, 3,719,677 bushels, $1,339,084; corn, 1,939,080 bushels, $969,540; wheat, 81,992 bushels, $63,954; hay, 1,066,524 tons, $11,785,090. Potatoes, 3,305,244 bushels, $1,322,098; tobacco, 1898, 158 acres, 236,950 pounds; apples, 504,000 barrels; maple sugar, 4,493,116 pounds, bounty $79,038. Value of live stock, June, 1900, $17,373,169. Wool clip, 1901, 1,226,880 pounds. Dairy factories, 1895, 190

Manufactures, etc.—In 1900, $48,547,964 invested in manufacturing enterprises. Chief articles produced: Lumber, pulp, cotton and woolen goods, boots, shoes, etc. The quarries constitute chief wealth of State. In production of slate ranks second only to Pennsylvania. Value, 1900, $917,462; roofing slate, 282,820 squares, value, $795,474. Leads in marble; value $2,484,852, over half value of all the States; fourth in granite, $1,113,788, value of limestone, $188,100; total stone output, $4,704,202.

Population.—Total population in 1790, 85,425; 1820, 235,981; 1860, 315,098; 1890, 332,422. Total population, census of 1900, 343,641 Male, 175,138; female, 168,503; native, 298,894; foreign, 44,747; white, 342,771; colored, 870; Africans, 826; Chinese, 39; Indians, 5.

Cities.—*Burlington*, metropolis, has a large lumber trade; near fine marble and limestone quarries; population, 18,640. *Rutland*, second city in size, noted for its quarries of white marble; population, 11,499. *Brattleboro* has extensive manufactures; population, 5,297. *Montpelier*, the capital, population, 6,266. *Barre*, leading center of granite industry; population, 8,448.

Railways.—Railroad construction begun in 1846; in December, 1849, two lines completed—Burlington to Connecticut River. Total number miles in operation 1850, 290; 1860, 554; 1870, 614; 1880, 914; 1890, 991.42; July, 1900, 1,012.11.

Education.—Public school enrollment, 1899-1900, 84,720; private, 7,019; expenditure, $1,074,222; school age, 5-21; compulsory school age, 8-15; text-books may be furnished. Educational institutions include: Normal schools at Castleton, Randolph Center, and Johnson; University of Vermont, Burlington; Norwich University, Northfield; Middlebury College, Middlebury; Vermont Industrial School, Vergennes.

Political.—Number of Senators, 30; Representatives, 246; term, 2 years. Number of electoral votes, 4. Voters must be actual citizens; residents of the State 1 year, town 3 months, precinct 30 days; registration required; ballot reform; bribers excluded.

Legal Holidays.—January 1, February 22, May 30, July 4, first Monday in September, Thanksgiving, December 25.

Legal.—Statute of limitations: Judgments, sealed instruments, 8 years; simple promissory notes, 6; notes signed in presence of attesting witnesses, 14; accounts, 6. Legal interest, 6 per cent. Redemption of tax sale, 1 year.

NEW HAMPSHIRE. Nū Hamp'shire. "Granite State."

Named after the County of Hampshire, England.

Historical.—One of the thirteen original States; adopted and ratified the Constitution June 21, 1788; ninth State admitted. First settlements made by English, at Portsmouth and Dover, 1623; Exeter and Hampton settled 1638 and 1639. It was united to Massachusetts 1641; made a royal province 1679; in 1685 again united to Massachusetts, and not finally separated until 1741. State Constitutions were adopted 1776, 1784, and 1792; the latter twice amended, 1852 and 1877.

Area.—Total area, 9,305 square miles; land, 9,005; water, 300; greatest length, 180 miles; breadth, 45 to 100. Counties, 10.

Physical Features.—Surface mountainous in the north and west, and nowhere level to any extent. One-seventh of area occupied by White Mountains, the "Switzerland of America." Highest elevation, Mt. Washington, 6,286 feet. Numerous beautiful lakes; area, 110,000 acres; Lake Winnepesaukee the largest, 22 miles long. Coast line, 18 miles. State has unlimited water power, utilized largely in manufactures.

Climate.—Summer heat never excessive; winters long and severe. Scenery and extreme healthfulness attract many summer tourists. Mean annual rainfall at Manchester, 43.1 inches; mean annual temperature, 45.9 deg.; highest, 96 deg.; lowest, 11 deg. below.

Agriculture.—Hay and potatoes are staple crops. In 1900 there were 29,324 farms, value $70,124,360. Number farming 1896, 42,670; value of farm products average $16,000,000 annually. Productions and values, 1900: Corn, 934,768 bushels, $523,470; wheat, 8,085 bushels, $7,438; oats, 995,148 bushels, $378,156; hay, 596,076 acres, 518,586 tons, $8,038,083; potatoes, 17,916 acres, 1,809,516 bushels, $959,043; tobacco, 1899, 109 acres, 181,644 pounds; apples, 1896, 1,604,000 barrels. Value of farm animals, June, 1900, $10,554,646. Wool clip, 1901, 424,567 pounds.

Manufactures, etc.—Manufacturing the prominent industry Chief manufactures cotton, woolen, and worsted goods. In 1900, 67 shoe firms employed 12,000 persons; value of output, $23,405,558. In 1895, 240,000,000 feet of spruce were made into lumber and 40,000,000 into pulp. Product of fermented liquor, 1900, 294,076 barrels. Value of brick and tile, $485,013; pottery, $18,500. Popular name of State derived from its famous white granite. State ranks fifth in production; value of output, 1900, $870,646; for building purposes, $299,418; cemetery purposes, $242,026.

Population.—Total population, 1790, 141,885; 1820, 244,161; 1860, 326,073; 1890, 376,530. Population, census of 1900, 411,588. Male, 205,379; female, 206,209; native, 323,481; foreign, 88,107; white, 410,791; colored, 797; Africans, 662; Chinese, 112; Japanese, 1; Indians, 22.

Cities.—*Manchester*, largest city, and one of largest cotton and woolen manufacturing centers in the country. Population, census of 1900, 56,987. *Nashua* has various important manufactures; particularly noted for cotton goods; population, 23,898. *Portsmouth*, only seaport in the State; noted for its excellent harbor; has ship-building; a famous summer resort; capital until 1807; population, 10,637. *Concord*, the capital, has many manufactories; near fine granite quarries; population, 19,632. *Dover*, important manufacturing center; population, 13,207.

Railways.—First railway chartered in 1835; number miles in 1840, 53; 1850, 467; 1855, 657; 1860, 661; 1865, 667; 1870, 736; 1875, 934; 1880, 1,015; 1885, 1,004; 1890, 1,146; July, 1900, 1,239.20.

Education.—Public school enrollment, 1899-00, 45,400; expenditures, $1,051,265; text books furnished; school age, over 6; compulsory school age, 8–14. Among educational institutions are included Dartmouth College, Hanover, founded by Congregationalists, chartered 1769 –Daniel Webster was graduated here in 1802; State Normal School, Plymouth; College of Agriculture and Mechanic Arts, Durham.

Political.—Number of Senators, 24; Representatives, 359; term, 2 years; number electoral votes, 4. Voters must be actual citizens, residents of the State, county, town, and precinct 6 months; registration required; ballot reform.

Legal Holidays.—February 22, May 30, July 4, first Monday in September, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, sealed instruments, mortgage notes, 20 years; accounts and promissory notes, 6 years; legal interest, 6 per cent. Redemption from tax sales, 1 year.

VERMONT
AND
NEW
HAMPSHIRE
SCALE OF STATUTE MILES.
0 5 10 20 30
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Longitude West from Greenwich.
73°
71°
VERMONT
NEW HAMPSHIRE
MASSACHUSETTS
QUEBEC
NEW YORK
ATLANTIC OCEAN
LAKE CHAMPLAIN
MONTPELIER
CONCORD
BOSTON
ALBANY
Dead River Sta.
Rangeley
Rangeley Lake
Moosetocmaguntic Lake
Mooselunkemeguntic Lake
Richardson Lake
Bemis
Phillips
Houghton
Rumford Falls
Bethel
West Paris
South Paris
Norway
Bridgton
Sebago
Sebago Lake
Richville
Portland
Cumberland Mills
West Scarboro
Saco
Alfred
Kennebunk
Maryland Ridge
Salmon Falls
South Berwick
Conway Jc.
York Beach
Long Beach
Kittery
Kittery Jc.
Portsmouth
Greenland
N. Hampton
Hampton
Seabrook
Salisbury
Newburyport
Rockport
Gloucester
Manchester
Nashua
Lowell
Lawrence
Haverhill
Marblehead
Salem
Beverly
Lynn
Revere
Wakefield
Woodstock
Thornton
Lincoln
Bartlett
Jackson
Albany
Madison
Ossipee
Center Ossipee
Bear Camp
Blairs
Tamworth
Wonalancet
Chocorua
Conway
Fryeburg
Brownfield
Denmark
Ice Pond
Bridgton Jc.
Sebago
Lake
Norway
Bethel
Gilead
Shelburne
Berlin Falls
Milan
Stratford
Stratford Bridge
Groveton
Lancaster
Jefferson
Whitefield
Littleton
Bethlehem
Franconia
Sugar Hill
Profile House
Franconia
Twin Mountain
Fabyans
Crawford
Bretton Woods
Gorham
Randolph
Jefferson Hill
Cherry Mountain
Carroll
Bartlett
Intervale
Glen
Conway
Fryeburg
Brownfield
Denmark
Ice Pond
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Sebago
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Bartlett
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Albany
Madison
Ossipee
Center Ossipee
Bear Camp
Blairs
Tamworth
Wonalancet
Chocorua

MASSACHUSETTS.

Măs-sa-chu'-sets. "Bay State."

Indian "About the Great Hills."

Historical.—Sixth in order of the thirteen original States to adopt and ratify the Constitution, date, February 6, 1788. First permanent settlement made by English (Pilgrims) at Plymouth, 1620; by Puritans at Salem, 1628; at Boston, 1630. Massachusetts a member of New England Confederation, 1643 to 1684; King Philip's war occurred 1675 to 1676; witchcraft trials at Salem, 1692, twenty persons executed. Leader in revolutionary movement and in anti-slavery agitation. Boston Massacre took place in 1770; "Boston Tea Party," 1773, $100,000. of tea destroyed; April 19, 1775, battles of Lexington and Concord; June 17, battle Bunker Hill. First State Constitution adopted 1780; this, with various amendments, constitutes the law of the State.

Area.—Total area, 8,315 square miles; land, 8,040; water, 275; length, northeast and southwest, 160 miles; breadth, 47 to 90 miles. Of the 69 islands, Martha's Vineyard and Nantucket are chief. Counties, 14.

Physical Features.—Taconic and Hoosac Mountains—"The Berkshires"—in the west. Highest altitude, Mt. Greylock, 3,500 feet; other noteworthy elevations, Mts. Wachusett, Everett, Tom, Holyoke, and Sugar Loaf. Southeastern section is in some places level and sandy, others marshy. The Merrimac, a tidal stream navigable to Haverhill, with the Connecticut, Housatonic, and numerous smaller streams, furnishes abundant water power which is extensively utilized. Atlantic coast line, including Cape Cod Peninsula, 300 miles. Chief harbors at Boston, Beverly, Salem, Marblehead, and New Bedford.

Climate.—Winters severe; sudden climatic changes; chilling east winds prevail along the coast; droughts uncommon. Mean annual rainfall, Boston, 45 inches; mean annual temperature, 48.9 deg.; highest, 102 deg.; lowest, 13 below.

Population.—Ranked fourth, 1790; fifth, 1810; eighth, 1840; sixth, 1890; seventh, 1900. Population, 1790, 378,787; 1810, 472,040; 1840, 737,699; 1870, 1,457,351; 1890, 2,238,943; 1900, 2,805,346. Male, 1,367,474; female, 1,437,872; native, 1,959,022; foreign, 846,324; white, 2,769,764; negroes, 31,974; Chinese, 2,968; Japanese, 53; Indians, 587.

Cities.—Massachusetts has proportionately the largest urban population of all the States. *Boston*, capital and metropolis, one of the chief commercial and literary centers in the country; has an extensive foreign and coasting trade; terminus of many railroads and steamship lines. Population, census of 1900, 560,892; area, 43 square miles. *Worcester*, *Taunton*, and *Springfield*, centers of iron and steel industries; population, Worcester, 118,421; area, 36 square miles. Population Taunton, 31,036; area, 44.25 square miles. Springfield, seat of largest arsenal and armory in United States; population, 62,059; area, 34 square miles. *Lynn*, principal center of boot and shoe industry; population, 68,513; area, 12 square miles. *Lowell*, *Lawrence*, *Fall River*, and *Holyoke*, chief centers of cotton industries. *Cambridge*, seat of Harvard University, the oldest college in America, founded 1636, chartered 1650. First printing press in America established at Cambridge; printing still a leading industry of the city. Population, 91,886.

Agriculture.—Staples are hay, forage crops, and potatoes; corn and wheat grown for home consumption; land more profitably used for fruit and garden products. Connecticut and a few other valleys of unsurpassed fertility. Some of the salt marshes near the coast have been diked and promise to become good farming land. Number of farms, 1900, 37,715; acreage, 3,147,064. Production and value of crops, 1900: Corn, 1,545,346 bushels, $834,487; oats, 550,786 bushels, $209,299; rye, 133,747 bushels, $100,310; potatoes, 2,261,454 bushels, $1,492,560; hay, 567,079 acres, 550,067 tons, $9,571,166; tobacco, 1899, 3,827 acres; 6,406,570 pounds; apples, 1896, 635,000 barrels.

Live Stock.—Number and value of animals, June, 1900: Horses, 75,034, value $5,826,457; sheep, 52,559, value $193,596; milch cows, 184,562, value, $6,546,954; other cattle, 101,382, value $1,583,963; swine, 78,925, value, $549,617. Wool clip, 1901, 200,670 pounds.

Fisheries.—About one-half the fishing vessels owned in the United States belong to Massachusetts; Gloucester, Yarmouth, and Provincetown, chief fishing ports. Of late years attention has been given to stocking fresh waters with food fishes. Investment in fisheries, 1898, $13,372,902; products, $4,463,727, nearly half of which obtained in the cod fisheries, value $2,097,050; other species, fresh and salted: Halibut, $547,440; mackerel, $361,864; herring, $332,547; oysters, $156,235; clams, $153,318; whale, $285,688. Number persons employed, 14,363. Has nearly half the value of the fishery products of New England. Lobster industry steadily decreasing. Government seeking to maintain supply through propagation.

Manufactures.—Fourth in value of manufactures. Number of establishments, 1900, 29,180; capital, $823,264,287; persons employed, 525,308; cost of material used, $552,717,955; products, $1,035,198,989. Value of woolen manufactories, $77,176,720. Ranks first in cotton. First cotton mill established at Beverly, 1787. One of the first woolen mills established at Newbury, 1794. Ship-building is carried on mainly at Boston, Newburyport, and Essex. First in production of rubber boots and shoes, value $16,490,015; second in paper, $22,141,461, and flax, hemp, and jute products, $11,388,933. Silk factories, 1900, 20; Brick and tile manufactured, $1,594,377; common brick, $1,123,586; pottery, $238,721; earthenware, $101,364; stoneware, $22,198. Distilled spirits, 1900-01, 1,681,812 gallons; fermented liquor, 1,827,915 barrels.

Quarries.—Ranks first in production of granite; handsome dark granite found near Quincy; that located near Chester is suitable for monumental and architectural purposes. Total value of granite, 1900, $1,698,605; granite used in the rough, $569,119; building purposes, $429,077; cemetery work, $80,573; paving blocks, $267,148. Marbles and limestone of Berkshire are wrought for building stone and manufacture of lime. New discoveries of fine marble have recently been made near Westfield. Total value of marble, 1900, $130,735; marble used in the rough, $5,950; for interior purposes, $10,961; building, $107,604; cemetery, $300. Value of limestone increased from $75,000 in 1895 to $209,359 in 1900; most of the product made into lime. Most of the sandstone comes from Worcester and East Long Meadow; value of product, 1900, $153,427. Slate has been known to exist for some time; State has been a producer within the last few years only.

Railways.—First railroad in the United States was constructed in Massachusetts; opened for traffic, at Quincy, 1827. In 1840 there were 301 miles; 1850, 1,035; 1865, 1,297; 1875, 1,817; 1892, 2,100; July, 1900, 2,113.58, averaging 7.55 miles to each 10,000 inhabitants.

Education, etc.—Foundation of present system established 1647. Public school enrollment 1899-00, 641,500; private, 79,205; school age no limit; compulsory school age, 8-14. Expenditures, $13,826,243; text-books furnished. Normal schools at Boston, Bridgewater, Framingham, Salem, Westfield, Worcester, Cambridge, Fitchburg, etc. In 1900, 9 universities and colleges. Public high schools, 237; private secondary schools, 97. Among the educational and State institutions are: Harvard University, Cambridge; Amherst College, Amherst; Williams College, Williamstown; Clark University, Worcester; Tufts College, Somerville; Boston University, Boston. For women: Wellesley College, Wellesley; Smith College, Northampton; Mt. Holyoke College, South Hadley; Radcliffe College, Cambridge, all of first rank. Perkins' Institution and Massachusetts School for the Blind, both in South Boston; Massachusetts School for the Feeble-minded at Waverley, besides many other public and private educational and charitable institutions. Numerous denominational and parochial schools and academies.

Legal Holidays.—February 22, April 19, May 30, July 4, first Monday in September, Thanksgiving, December 25.

Political.—State, congressional, and presidential elections, Tuesday after first Monday in November. Number of Senators, 40; Representatives, 240; term, 1 year; sessions, annual; meets first Wednesday in January; limit of session, none. Number of electoral votes, 15; voters must be citizens, residents of State 1 year, county and town 6 months, precinct 30 days; registration required; ballot reform. Paupers, non-taxpayers, and persons unable to read and write excluded. Women vote for school committees.

Legal.—Statutes of limitation: Judgments, actions upon attested note, personal actions, unlimited contracts, 20 years; contracts not under seal, 6; legal rate of interest, 6 per cent; by contract on loans less than $1,000, 18 per cent; over $1,000, no limit. Redemption from tax sale, 2 years.

Longitude West from Greenwich.
NEW HAMPSHIRE
VERMONT
CONNECTICUT
RHODE ISLAND
PROVIDENCE
BOSTON
NEWPORT
ATLANTIC OCEAN
MASSACHUSETTS BAY
CAPE COD BAY
BUZZARDS BAY
VINEYARD SOUND
NANTUCKET SOUND
MASSACHUSETTS
SCALE OF STATUTE MILES
0 5 10 20 30 40
ENVIRONS OF BOSTON.
SCALE OF MILES.
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CONNECTICUT.

Kon-net'e-kut.
"Nutmeg State."

Indian "Quonektacat," upon the long river.

Historical.—One of the thirteen original States. First settlements made in Connecticut Valley at Hartford, Windsor, and Wethersfield by emigrants from Massachusetts, 1633-36. Saybrook Colony founded by John Winthrop, 1635; New Haven founded 1638. Connecticut and New Haven Colonies united under a charter granted 1662; charter adopted as a constitution 1776, and remained in force until adoption of present constitution in 1818. State capitals were Hartford and New Haven from 1701 to 1873, when Hartford became the sole capital.

Area.—Total area, 4,990 square miles; land, 4,845; water, 145; average breadth east and west, 86 miles; length, 55. Counties, 8.

Physical Features.—Highest altitude, Bear Mountain, 2,355 feet. Atlantic coast line, 100 miles; State has large number good harbors. Connecticut, Housatonic, Thames, Yantic, and other rivers provide excellent water power, largely utilized.

Climate.—Lowest temperature at New Haven, 14 deg. below; highest, 100 deg.; mean annual, 49.4 deg.; mean annual rainfall, including melted snow, 49.7 inches.

Agriculture.—Valley of the Connecticut the most fertile region; famous for its excellent tobacco, which with hay forms the leading production. Fruit, potatoes, dairy products, and market gardening are important. Productions and values for 1900: Corn, 1,771,180 bushels, $673,043; oats, 578,987 bushels, $202,645; rye, 239,802 bushels, $155,871; potatoes, 2,478,528 bushels, $1,734,970; hay, 427,411 tons, $7,150,586; apples, 1896, 448,000 barrels; tobacco, 1899, 10,120 acres, 16,930,770 pounds, $3,074,022. Total value of farm animals, June, 1900, $10,932,212. Wool clip, 1901, 126,616 pounds.

Manufactures.—One of the foremost States. Factories, 1900, 9,128; employés, 186,675. Silk industry dates from 1732. Ranks fourth in silk; number factories, 33; value of products, $12,378,981; cotton goods, $15,500,842; all textile products, $49,265,752; brick and tile, including Rhode Island, $1,182,575; pottery, $61,250. Distilled spirits, 1900-01, 149,079 gallons; fermented liquor, 787,411 barrels; pig iron, 1901, 8,442 tons.

Quarries.—Long known as a granite State; value, 1900, $507,754. Noted for the excellence and beauty of its brown sandstone; value of output, $192,593; limestone, $148,060; feldspar and quartz quarried quite extensively. Value total stone output, $848,407. Excellent iron ore mined for more than 150 years; first forge in State erected near Salisbury, 1734.

Population.—Ranked eighth, 1800; twenty-first, 1850; twenty-ninth, 1900. Population, 1800, 251,002; 1850, 370,792; 1890, 746,258. Population 1900, 908,420. Male, 454,294, female, 454,126; native, 670,210; foreign, 238,210; white, 892,424, colored, 15,996; Africans, 15,226; Chinese, 599; Japanese, 18, Indians, 153.

Cities.—*New Haven*, metropolis, and important commercial and manufacturing center, often called the "Elm city" from the number and beauty of its elms; population, census of 1900, 108,027. *Hartford*, capital, center of insurance business, book publishing and manufactures; population, 1900, 79,850. *Bridgeport*, port of entry and one of the chief manufacturing centers of the State; population, 1900, 70,996.

Railways.—First railroad in operation, 1838; 1840, 102 miles; 1860, 601; 1880, 923; 1890, 1,006; July, 1900, 1,023.62.

Education.—Public school enrollment, 1899-00, 213,800; private, 31,190; expenditures, $3,189,249; school age, 4-16; compulsory school age, 8-16. Text books may be furnished by vote of the town. Normal schools at Bridgeport, New Britain, New Haven, and Willimantic. Yale College, established 1701; Trinity, 1824; Wesleyan, 1831; Hartford Theological Seminary; Berkeley Divinity School.

Political.—Number of Senators, 24; Representatives, 252; term, 2 years. Number of electoral votes, 6. Voters must be actual citizens, residents of State 1 year, town 6 months; registration required; ballot reform. Persons unable to read and convicts excluded.

Legal Holidays.—January 1, February 22, May 30, July 4, first Monday in September, Thanksgiving, and December 25.

Legal.—Statutes of limitation: Judgments, no law; notes, negotiable, 6 years; non-negotiable, 17 years; accounts and contracts not under seal, 6 years; verbal executory contracts, 3 years; redemption of tax sales, 1 year; legal interest, 6 per cent; by contract, any.

RHODE ISLAND.

Rōd Ī'land.
"Little Rhody."

Named after the Island of Rhodes.

Historical.—One of the thirteen original States, and the last to ratify the Constitution; ratification took place May 29, 1790. Possibly visited by the Northmen, 1000; visited by Verrazano, 1524; first settlement made by Roger Williams, at Providence, 1636; Portsmouth and Newport settled during 1638 and 1639. Providence Plantations, in Narragansett Bay, incorporated 1643; charter for Rhode Island and Providence obtained 1663; present State Constitution adopted 1842.

Area.—Smallest State in the Union. Total area, 1,250 square miles, or 694,400 acres; land, 1,085 square miles; water, 165; length, north to south, 48 miles; breadth, 35; counties, 5.

Physical Features.—Highest altitude, at Durfee Hill, 805 feet. Atlantic coast line deeply indented by Narragansett Bay, which covers an area of 300 square miles, and contains 15 islands. Many good harbors; nearly all rivers furnish valuable water power for the numerous manufactories; many notable summer resorts along the coast.

Climate mild and equable, being modified by the Atlantic. Mean annual rainfall at Block Island, 44.2 inches; mean annual temperature, 49.3 deg.; highest, 88 deg.; lowest, 4 deg. below.

Agriculture.—Small area adapted to agriculture; chief products are hay, potatoes, and Indian corn. Value of corn, 1900, $175,744, 262,304 bushels; potatoes, 698,232 bushels, $488,762; hay, 72,278 acres, 66,496 tons, $1,243,475. Total value of farm animals, June, 1900, $2,593,659. Wool clip, 1901, 36,460 pounds.

Fisheries.—Capital, 1898, $957,142; product, $955,058. Clams of Narragansett Bay renowned; oyster planting in Providence River an important pursuit. Quantities of fresh fish taken for the New York market.

Manufactures, etc.—Rhode Island exceeds all others in per capita value of products. Total value, 1900, $184,074,378. Number of establishments, 4,189; persons employed, 100,961. Ranks second in cotton goods; in proportion to population, ranks first in production of cotton, woolen, and worsted; cotton industry dates from 1790-93. In 1900, 218 establishments in textile industries; capital employed, $97,383,015; value of products, $78,133,258. Silk factories, 1900, 6. Value of brick and tile, with Connecticut, $1,088,722; distilled spirits, 1901, 149,079 gallons. Ranks third in output of rubber boots and shoes, value $8,034,417. Value of granite in 1900 was $444,816.

Population.—The most densely populated of all the States; ranked fifteenth in 1790; thirty-fourth in 1900. Total population in 1790, 68,825; 1890, 345,506; 1900, 428,556. Male, 210,516; female, 218,040; native, 294,037; foreign, 134,519; white, 419,050; colored, 9,506, Africans, 9,092; Chinese, 366; Japanese, 13; Indians, 35.

Cities.—*Providence*, metropolis and capital; second city in New England; manufacturing center, with considerable coasting trade; population, 1900, 175,597. *Pawtucket*, has important manufactures of cotton goods, engines, etc.; cotton manufacturing established 1790; population, 1900, 39,231. *Woonsocket*, has large woolen and cotton mills; population, 28,204. *Newport*, a former capital, and a fashionable watering place; population, 1900, 22,034.

Railways.—Length of roads; 1840, 50 miles; 1850, 68; 1860, 108; 1870, 136; 1875, 179; 1880, 210; in July, 1900, the total length was 211.79.

Education.—Public school enrollment, 1899-00, 102,259; private, 16,162; expenditure, $1,570,895; school age, over 5; compulsory school age, 7-15; text-books furnished. School year the longest of the States. Public high schools, 20; private secondary schools, 14; free libraries, 50. Brown University, Providence, founded 1764; Normal School, Providence.

Political.—State elections, annual. Number of Senators, 38; Representatives, 72; term, 1 year. Number of electoral votes, 4. Voters must be actual citizens, residents of the State 2 years, town 6 months; registration required; ballot reform.

Legal Holidays.—February 22, State election day, May 30, July 4, Thanksgiving, December 25, Arbor Day.

Legal.—Statutes of limitation: Judgments and sealed instruments, 20 years; notes and open accounts, 6 years; redemption of tax sales, 1 year. Legal interest rate, 6 per cent; by contract, any.

CONNECTICUT
AND RHODE ISLAND.
SCALE OF STATUTE MILES.
0 5 10 20 30 40
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MASSACHUSETTS
CONNECTICUT
NEW YORK
RHODE ISLAND
LONG ISLAND
LONG ISLAND SOUND
ATLANTIC OCEAN
BLOCK ISLAND SOUND
Longitude West from Greenwich.
Springfield
Worcester
Providence
Hartford
New Haven
Waterbury
Bridgeport
Norwich
New London
Meriden
Torrington
Willimantic
Manchester
Rockville
Putnam
Thompson
Pawtucket
Olneyville
Greenwich
Kingston
Block Island
Gardiners I.
Fishers I.
Plum I.
Montauk Pt.
Montauk
Sag Harbor
Greenport
Riverhead
Wading River
Northport
Oyster Bay
Bridgehampton
Gardiners Bay
Great Peconic Bay
Shinnecock Bay
Moriches Bay
Block Island
Salt Pond
Black Rock
Sandy Pt.
Watch Hill
Noyes Pt.
Stonington
Mystic
Groton
New London
Saybrook
Clinton
Guilford
Branford
Milford
Stratford
Bridgeport
Greenwich
Stamford
Norwalk
Darien
Westport
Fairfield
Southport
Greens Farms
Saugatuck
Wilton
Ridgefield
Danbury
New Milford
Litchfield
Torrington
Winsted
Canaan
Norfolk
Salisbury
Lakeville
Sharon
Cornwall
Kent
Gaylordsville
Bulls Br.
Bridgewater
Roxbury
Woodbury
Southbury
Oxford
Seymour
Ansonia
Derby
Shelton
Stepney
Monroe
Redding
Ridgebury
Newtown
Sandy Hook
Stevenson
Botsford
Hawleyville
Brookfield
Dunbury
Milltown
Bethel
Georgetown
Cannon
Easton
Trumbull
Redding Depot
Huntington
Titicus
Long Hill
Brantville
Pine Plains
Millerton
Boston Corners
Sheffield
Canaan
Falls Village
Lime Rock
Cornwall Bridge
Milton
Litchfield
North Kent
Kent Furnace
Bantam
Bantam Lake
Northfield
Romford
Thomaston
Washington
Watertown
Judds Br.
Boardmans Br.
Sherman
Lanesville
Brookfield Jct.
Roxbury Falls
Middlebury
Naugatuck
Beacon Falls
Mt. Carmel
Centerville
Northford
Clintonville P.O.
North Haven
Montowese
East Haven
Branford
Pinerchard
Indian Neck
Stony Creek
Guilford
Madison
Westbrook
Clinton
Saybrook
Deep River
Chester
Hadlyme
Hamburg
Essex
Lyme
Old Lyme
Niantic
Waterford
Millstone Point
Jordan Cove
Poquonock
Groton
Mystic
Westerly
Charlestown
Perryville
Wakefield
Carolina
Kenyon
Wood River Jct.
Hope Valley
Wyoming
Rockville
Arcadia
Slocumville
Allenton
Wickford Jct.
North Kingstown
Wickford
Quonochontaug
Watch Hill
Noyes Pt.
Pt. Judith
Narragansett Pier
Kingston
Peace Dale
Wakefield
Newport
Jamestown
Middletown
Portsmouth
Tiverton
Bristol Ferry
Bristol
Warren
Barrington
Riverside
Bullocks Point
Rumford
East Providence
Pawtucket
Central Falls
Lonsdale
Manville
Albion
Ashton
Valley Falls
Cumberland Hill
Woonsocket
Diamond Hill
Attleboro
Whittenton
Mansfield
Foxboro
Walpole
Medfield
Millis
Dedham
Framingham
Natick
Millbury
Grafton
Barbers
Lake Quinsigamond Shore
Webster
Thompson
Pascoag
Oakland
Chepachet
Georgiaville
Greenville
Foster
Scituate
Killingly
Danielson
Brooklyn
Pomfret
Putnam
Woodstock
Mechanicsville
Stafford Springs
Stafford
Grosvenordale
Thompson
Eastford
Westford
Ellington
Tolland
Willington
Rockville
Vernon
Somers
Broadbrook
Windsor Locks
Windsor
Suffield
Thompson
Enfield
Hazardville
Shaker Sta.
Ellithorpe
Mashapaug
Elliott
Hampton
Chaplin
Windham
Willimantic
Columbia
Lebanon
Franklin
Yantic
Taftville
Jewett City
Gales Ferry
Ledyard
Mohegan
Moodus
Salem
Colchester
Hebron
Gilead
Bolton
Manchester
South Manchester
Eagleville
Coventry
Mansfield Center
Mansfield
Andover
Hop River
Glastonbury
Wethersfield
Rocky Hill
Berlin
Kensington
Farmington
Newington
Hartford
Windsor
Poquonock
Tariffville
Simsbury
Granby
Canton
Avon
Collinsville
Bloomfield
Meadow
Pine
New Hartford
Winsted
Barkhamsted
Colebrook
Norfolk
Canaan
Whiting River
Colebrook River
Chapinville
Twin Lakes
Millerton
Pine Plains
Stissing Jct.
Sharon Valley
Ellsworth
Limerock
Lakeville
Salisbury
Falls Village
Canaan
Norfolk
Colebrook
Winsted
Barkhamsted
Granby
Suffield
Thompson
Windsor
Poquonock
Tariffville
Simsbury
Farmington
Newington
Hartford
Wethersfield
Rocky Hill
Berlin
Kensington
Southington
Cheshire
Plantsville
Milldale
Waterville
Plymouth
Thomaston
Harwinton
Torrington
Litchfield
Burlington
Campbell Union
Terryville
Forestville
New Britain

NEW YORK. Nū York. "Empire State."

Named in honor of the Duke of York.

Historical.—One of the thirteen original States; ratified the United States Constitution July 26, 1788; eleventh State to enter the Union. In 1609, explorations made by Champlain in the north; in the south, Hudson visited New York Bay and explored Hudson River as far as site of Albany. First settlements made by Dutch on Manhattan Island, 1614; New York (New Amsterdam) founded 1623. Devastated by Indian warfare 1641; captured by English 1664; retaken by Dutch 1673; restored to England 1674. State played an important part in the Revolutionary War and the War of 1812. State Constitution adopted 1777; present Constitution adopted 1846.

Area.—Total, area, 49,220 square miles; land, 47,620; water, 1,600; extreme length east to west, 412 miles; north to south, 311. Area of Long Island, 1,682 square miles. Number of counties, 61.

Physical Features.—Boundaries comprise over 800 miles of navigable waterway. Lakes Erie, Ontario, and Champlain furnish 352 miles; Long Island Sound and the Atlantic Ocean, 246; river boundaries, 281. New York belongs chiefly to the Hudson and St. Lawrence river systems; possesses a magnificent system of inland navigation and an extensive water power. Surface greatly diversified. Adirondack Mountains in the northeast; Catskill, Highlands, Taconic, etc., in the south and east; highest altitude, Mt. Marcy, 5,379 feet. State contains many fine lakes and is noted for its picturesque scenery. Possesses many small but important islands.

Climate.—Winter climate, particularly in the Adirondacks, usually very cold but healthful; snowfalls heavy; rainfall sufficient but not excessive. Mean annual rainfall at Albany, 37.9 inches; mean annual temperature, 48.2 deg.; highest, 98 deg.; lowest, 18 deg. below.

Agriculture.—State ranks second in value of farms; stands first in production of potatoes, buckwheat, and broom corn, and produces a quarter of the hops; second in rye, third in hay, fifth in oats, sixth in barley. Sugar beets, 2,800 acres; production of maple sugar, 1896, 1,539,257 pounds; bounty $27,070. Hay, 1900, 3,351,991 tons, value $47,095,474; corn, 17,236,032 bushels, $8,100,935; wheat, 6,496,166 bushels, $5,002,048; barley, 3,751,724 bushels, $1,913,481; rye, 3,189,165 bushels, $1,785,932; buckwheat, 3,280,158 bushels, $1,809,690; potatoes, 27,481,356 bushels, $12,366,610; oats, 44,538,974 bushels, $14,252,472; hops, 1899, 58,000 bales; tobacco, 1898, 7,460 acres, 10,344,000 pounds.

Horticulture, Etc.—State leads all others in number and value of its nurseries. First nursery established previous to 1800. Apples, pears, grapes, plums, and small fruits are grown extensively. Western New York the chief fruit district. State ranks second in the Union in grape industry and third of the Eastern and Middle States in production of apples. Latest report gives yield of apples, 1,643,000 barrels.

Live Stock.—New York ranks high in value of live stock. Number and value of farm animals, June, 1900: Horses, 628,488, $47,977,981; sheep, 1,745,746, $5,921,941; milch cows, 1,501,608, $48,694,512; other cattle, 1,094,781, $14,040,662; swine, 676,639, $3,794,332; mules, 3,313, $229,172. Ranks first as a dairy State; famous for its cheese and butter. Wool an important product; clip, 1901, 5,840,784 pounds.

Fisheries.—Fisheries employ 7,500 men and 650 vessels; value yearly product, 5,000,000. Menhaden, bluefish and oysters, principally. Cod and mackerel, Sag Harbor; lake fish, Buffalo; shad, Hudson River. In 1899-00, 212,405,409 fish fry planted; State hatcheries supplied 161,533,201 and United States 50,872,298.

Manufactures.—State leads all others. Establishments, 1900, 78,658; capital, $1,651,210,220; products, $2,175,726,900; wage-earners, 850,000; wages, $490,931,300. Leading industries: clothing, value product, $233,370,447; foundry and machine products, $96,636,517; printing and publishing, $95,232,051; textiles, $94,263,047; refined sugar and molasses, $90,680,487; liquors, $58,282,253, slaughtering and meat-packing, $57,431,293; tobacco, etc., $53,660,580; lumber products, $45,523,234; besides paper and wood pulp, $26,715,628, including largest pulp mill in world; flour, $42,796,340. Second in value of ships built, $8,647,371. Pig iron, 1901, 283,662 tons; distilled spirits, 1900-01, 3,240,021 gallons; first in fermented liquor, 9,963,806 barrels; third in Portland cement; second in cigars, 1,291,273,550; first in flax, hemp, and jute goods, $11,674,669; third in artificial ice, $1,025,308, and oil refining, $27,184,524.

Petroleum.—Western New York ranks among prominent oil-producing localities. New York production increased from 912,948 barrels in 1895 to 1,300,925 barrels in 1900. Value of product, 1900, $1,756,227; of natural gas, $249,000.

Minerals.—Iron ore of excellent quality mined extensively. Total output for the State, 1900, 441,485 long tons, a loss of 0.5 per cent from that of 1899. Total value at mines, $1,103,817. New York ranks second as a producer of magnetic iron ore—discovered on Sterling Mountain as early as 1750; 345,714 long tons mined in 1900. Ranks first among salt-producing States; principal districts, Onondaga, Warsaw, Genesee, and Ithaca. Total production, 1900, 7,897,071 barrels; value $2,171,418; rock salt, 1896, 173,663 tons. Ithaca district produced 74,000 barrels. Has extensive quarries of stone and marble. Thirty counties produce limestone; total value of output, 1900, $1,730,162; value of sandstone, $1,467,496. Total value of slate, $62,755, including $58,360 for roofing; marble, $332,518; granite, $446,171. Excels all other States in marble for outside building.

Population.—New York ranked fifth in population in 1790, third in 1800, second in 1810, and first from 1820 to 1900. Total population 1790, 340,120; 1830, 1,918,608; 1860, 3,880,735; 1890, 5,997,853; 1900, 7,268,894. Classification: Male, 3,614,780; female, 3,654,114; native, 5,368,469; foreign, 1,900,425; white, 7,156,881; colored, 112,013; Africans, 99,232; Chinese, 7,170; Japanese, 354; Indians, 5,257.

Cities.—*New York*, largest city of the western hemisphere and after London the largest in the world; as a commercial and financial center ranks second only to London. The State capital from 1784 to 1797 and United States capital 1785 to 1790. Population, 1900, 3,437,202. *Buffalo*, second city in State, has important lake commerce; chief commodities, grain, live stock, lumber, and coal; population 1900, 352,387. *Albany*, capital, founded by Dutch, 1614; on Hudson River at head of navigation; important distributing point for grain and lumber; population, 1900, 94,151. *Rochester*, important center of manufactures, garden seeds, and nurseries; population 1900, 162,608. *Syracuse*, prominent railway and manufacturing center; population, 108,374.

Railways, Etc.—First railroad, Albany to Schenectady, opened 1831. Canals first planned 1761; Erie Canal begun 1817, finished 1825; 364 miles of canals; cost, $50,000,000. Number of miles of railroad in operation 1835, 104; 1850, 1,361; 1860, 2,682; 1875, 5,423; 1885, 7,370; 1890, 7,745; July, 1900, 8,121.03.

Education.—First schools est. by Dutch. Academy and classical school, est. 1659. Free grammar school, 1702. General school system org. 1812. State Normal school est. 1844. Present system est. 1867. Compulsory education, 1875. Public school enrollment, 1899-00, 1,786,000; expenditures, $33,421,491. School age, 5-21; compulsory, 8-16. School system controlled by Board of Regents, constituting "Univ. of State of N. Y." New York widely noted for higher institutions. Columbia College, formerly Kings College, founded 1746; Cornell University, founded 1868; New York University, 1832; Military Academy, West Point, 1802; Union College, 1795; Hamilton, 1812; Colgate, 1819; Hobart, 1822; Rensselaer Poly. Inst., 1824; Syracuse, 1871. For women: Elmira, 1855; Vassar, 1861; Wells, 1868; Barnard, 1889—all of first rank. Theological seminaries include: Auburn, 1820; General, 1817; Union, 1836. There are 16 State Normal schools.

Political.—State elections annual. State, congressional, and presidential elections, Tuesday after first Monday in November; number of Senators, 50; Representatives, 150. Sessions annual, meet first Wednesday in January; limit of session, none; term of Senators, 2 years; Representatives, 1 year; number of electoral votes, 36. Term of Governor, 2 years; salary, $10,000 annually; residence free. Voters must be actual citizens, residents of State 1 year, of county 4 months, town and precinct 30 days; registration required in cities of 7,000; ballot reform. Election bettors or bribers and convicts excluded.

Legal Holidays.—January 1, February 12 and 22, May 30, July 4, first Monday in September, general election day, Thanksgiving, December 25, Saturday afternoon.

Legal.—Statutes of limitation: Judgments, recovery of real estate, and sealed instruments, 20 years; open accounts and notes, 6 years; contracts not under seal, 6; redemption of tax sales, 2 years. Legal interest rate, 6 per cent; by contract, any.

Longitude West from Greenwich
NEW YORK.
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60 70
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SAME SCALE.
RAND, MCNALLY & CO., ENGRAVERS, CHICAGO.

PENNSYLVANIA.

Pen-sil-va'-ne-ah. "Keystone State."

Penn's "Sylvania," forest country.

Historical.—One of the thirteen original States. Second to enter the Union. First settlements made by the Swedes on Tinicum Island, 1643, and at Upland, Chester, 1648; passed under the rule of the Dutch of New Amsterdam 1655. Became British territory 1664. Permanently colonized by William Penn 1682; land granted 1681, by Charles II of England. Philadelphia founded 1682. Boundary dispute with Maryland settled by establishment of Mason and Dixon's line 1767. First Continental Congress met in Philadelphia 1774. State constitutions adopted 1776, 1790, 1838, and 1873. Constitution of the United States adopted and ratified December 12, 1787. State was the scene of numerous important events of the Revolutionary and Civil wars.

Area.—Total area, 45,215 square miles, or 28,790,400 acres; land, 44,985 square miles; water, 230; greatest length, east to west, 303 miles; north to south, 176 miles. Counties number 67.

Physical Features.—Surface exceedingly varied. Appalachian Mountain system traverses State northeast to southwest; covers one-fourth entire area; Allegheny Range the highest, elevation 2,000 to 2,800 feet; southeast comparatively level and low-lying. Principal rivers, Ohio, Susquehanna, Delaware, Allegheny, and Monongahela; Delaware navigable to Philadelphia. Only one of the thirteen original States without sea coast; coast line on Lake Erie, 45 miles.

Climate.—Central and Northern uplands, winters long and cold, and occasional frosts in summer; Ohio Valley and southeast, summers long and hot; Susquehanna Valley, to the south, more equable climate. Mean annual rainfall at Philadelphia, 38.8 inches; mean annual temperature, 53.9 deg.; highest, 102 deg.; lowest, 5 deg. below.

Agriculture.—Over one-fifth the total population in the southeast engaged in agriculture. A leading State in the production of rye, hay, buckwheat, potatoes, orchard products, and tobacco. First in rye, 1900, 4,416,299 bushels, $2,340,638; second in buckwheat, 3,188,402 bushels, $1,753,621; hay, sixth, 2,672,561 tons, $37,148,598; wheat, 20,281,334 bushels, $14,602,560; oats, 38,000,872 bushels, $11,400,262; corn, 32,707,900 bushels, $14,718,555; potatoes, 10,921,748 bushels, $5,788,526; tobacco, 1898, 23,951 acres, yield, 31,186,350 pounds; second of Eastern States in production of apples, yield, 1,901,000 barrels. Market gardening and floriculture profitable industries. State contains many large nurseries.

Live Stock.—Of the North Atlantic States, Pennsylvania ranks second only to New York in number and value of farm animals. June, 1900, horses numbered 590,981, value $40,948,827; mules, 38,059, $2,907,690; sheep, 1,531,066, $4,642,606; milch cows, 943,773, $29,141,561; other cattle, 953,074, $13,921,630; swine, 1,107,981, $5,830,295. Dairy and wool products of great value; butter, 1898, 96,199,428 pounds; cheese, 5,457,897 pounds. Wool clip, 1901, 4,650,750 pounds.

Manufactures.—One of the most important manufacturing States. In 1900 there were 52,185 establishments, employing 781,273, with a combined capital of $1,551,548,712; value of products, $1,834,790,860. State leads all others in iron and steel industries. In 1900, produced 60 per cent of all steel; nearly 50 per cent of pig iron; 57 per cent of iron and steel in finished form; over 40 per cent of tin plate. Output of pig iron 6,365,935 tons, value $50,927,480. Steel, 6,256,775 tons. Value of iron and steel in finished form, $249,736,207. Number of tin plate factories, 23; output, 297,854,000 pounds. Glass factories, 119; capital, $28,287,187; value of products, $22,011,180. First paper mill erected in 1691; number of paper and pulp mills, 1900, 73; capital, $16,424,107; value of product, in which State ranks fourth, $12,367,900. Leads in cigar output; factories, 5,175; production, 1,624,527,885 cigars. Leads in coke; production increased 300 per cent during the past two decades. Ovens, 1900, 32,543; output, including N. Y., 13,798,893 tons; value $30,853,449. Second in value of clay products; first in fire-brick, total value brick and tile, $12,000,875; pottery, $1,023,773. Leads in Portland cement, 1897, 1,200,000 barrels, $1,740,000. Distilled spirits, 1900-01, 8,549,614 gals.; fermented liquor, 4,917,413 bbls.; leads in value of ships built—$14,493,158; in oil refining, $34,977,706; and artificial ice, 735,018 tons, $2,000,931.

Textile Manufactures.—Among the Middle States Pennsylvania leads in cotton manufactures, leads all others in woolen industries; is second in the United States in silk manufactures. In 1900, silk manufactories numbered 121, with 942,545 spindles, 12,949 looms, 21,773 employés; value of products, $31,072,096.

Minerals.—State ranks among the first in mineral wealth; coal, iron, and petroleum lead in importance. Coal discovered in Schuylkill region 1790; first regular shipment made in 1820 to Philadelphia; leading State in production; output always exceeds 50 per cent of total coal product of the United States. Coal area: Anthracite, 480 square miles; bituminous, 9,000 square miles. Total product, 1900, 137,212,241 short tons, value $163,096,396. Anthracite, 57,367,915 tons, value $88,757,851; bituminous, 79,842,326 tons, value $77,438,545. State produces 36 per cent of all bituminous coal mined. Ranks fifth in production of iron ore, first in magnetite. Output, 1900, 877,684 long tons. Second in production of crude petroleum and first in value; output, 13,258,202 barrels, value $18,088,016. First in value of natural gas; value of output, $10,187,412. Salt in the northwest; total product, 981,770 barrels, value $473,687.

Quarries.—State has numerous quarries. Leads in output of limestone; ranks second in sandstone; furnishes 69 per cent of total output of slate. Value of limestone product, 1900, $3,800,318; sandstone, $1,043,321; slate, $2,713,590, including $2,202,742 roofing slate. Total stone product, $8,104,675.

Population.—Ranked second in 1790 and 1800; third in 1810 and 1820; second from 1830 to 1900. Total population in 1790, 434,373; 1810, 810,091; 1850, 2,311,786; 1890, 5,258,014; 1900, 6,302,115. Male, 3,204,541; female, 3,097,574; native, 5,316,865; foreign, 985,250; white, 6,141,664; colored, 160,451; Africans, 156,845; Chinese, 1,927; Japanese, 40; Indians, 983.

Cities.—*Philadelphia*, "City of Brotherly Love," founded 1682; capital of United States, 1790 to 1800; of State, until 1790; metropolis of Pennsylvania; third city in the United States in population and manufactures; a leading center of foreign, domestic, and coastwise trade; population, census of 1900, 1,293,697. *Pittsburg*, "Smoky City," second in size and importance, with Allegheny, opposite, forms a leading center of iron, steel, copper, and glass industries of the country; population, census of 1900, 321,616; Allegheny, 129,896. *Scranton*, fourth city in size; center of great anthracite coal region; extensive manufactures of iron, steel, machinery, etc.; population, 102,026. *Reading*, flourishing railway and manufacturing center; population, 78,961. *Harrisburg*, capital, has large manufactures of iron and steel; population, 50,167. *Erie*, on Lake Erie, is a port of entry; has important iron manufactories and a large trade; population, 52,733.

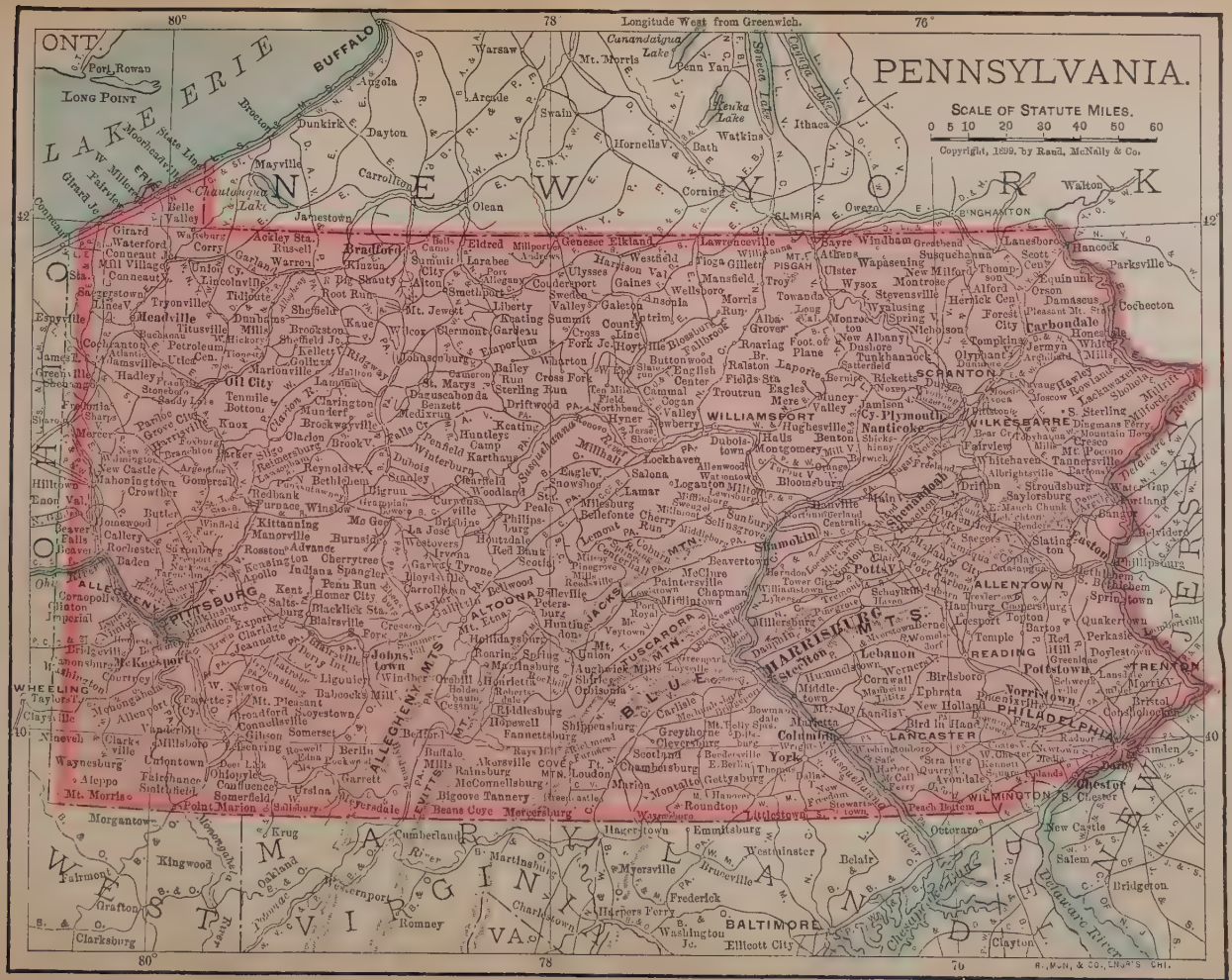
Railways.—Earliest road operated, the "Switchback," a coal road, opened 1826. Philadelphia & Columbia and Portage roads, 118 miles, opened 1833–4. State had 754 miles in operation, 1840; 1,240, 1850; 1,800, 1855; 2,598, 1860; 3,728, 1865; 4,656, 1870; 5,868, 1875; 6,191, 1880; 7,746, 1885; 8,700, 1890; July, 1900, 10,277.37 miles.

Education.—Common school law enacted 1834. School age, 6-21; compulsory, 8-16; expenditure, $21,476,995; textbooks furnished. Public school enrollment, 1,759,300. Normal Schools at Bloomsburg, California, Clarion, East Stroudsburg, Edinboro, Kutztown, Lockhaven, Mansfield, Millersville, Philadelphia, Pittsburg, Shippensburg, Slippery Rock, West Chester, Indiana. Univ. of Pennsylvania, organized 1753, and Girard College, Philadelphia; Lehigh University, Bethlehem; Lafayette College, Easton; Haverford College, Haverford; Dickinson College, Carlisle; Bryn Mawr College.

Political.—State elections, annual; State, congressional, and presidential elections, Tuesday after first Monday in November; number of Senators, 50; Representatives, 204; sessions biennial, in odd-numbered years; meets first Tuesday in January, limit of session, none; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 32. Voters must be actual citizens, residents of State 1 year, of precinct 2 months; registration required; ballot reform. Non-taxpayers and political bribers excluded.

Legal Holidays.—January 1, February 22, Good Friday, May 30, July 4, first Monday in September, general election day, Thanksgiving, December 25, and Saturday afternoon.

Legal.—Statutes of limitation: Judgments, sealed instruments, 20 years; contracts, notes, instruments not under seal, 6; personal action, 2; redemption of tax sales, 2 years, except in incorporated cities. Legal interest rate, 6 per cent; by contract with non-residents, 7.


PENNSYLVANIA.
Longitude West from Greenwich.
80°
78
76°
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60
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ONT.
LAKE ERIE
NEW YORK
OHIO
WEST VIRGINIA
MARYLAND
DELAWARE
NEW JERSEY
BUFFALO
Port Rowan
LONG POINT
Dunkirk
Dayton
Mayville
Jamestown
Warsaw
Angola
Arcade
Cuttaraugus Creek
Cunandaigua Lake
Mt. Morris
Penn Yan
Seneca Lake
Canandaigua Lake
Keuka Lake
Ithaca
Watkins
Hornellsv.
Bath
Corning
ELMIRA
Owego
BINGHAMTON
Walton
Olean
Belle Valley
Girard
Waterford
Conneaut
Union City
Connearty
Sagerstown
Tryonville
Meadville
Titusville
Cochranton
Petroleum Centre
Oil City
Tennile
Knox
Brockwayville
Clarion
Brookville
Punxsutawney
Reynoldsville
Bethlehem
Du Bois
Clearfield
Curwensville
Philipsburg
Houtzdale
Red Bank
Tyrone
Altoona
Hollidaysburg
Roaring Spring
Martinsburg
Bedford
Everett
Mt. Pleasant
Broadford
Connellsville
Somerset
Berlin
Johnstown
Ebensburg
Carrolltown
Patton
Ashville
Cresson
Gallitzin
Blairsville
Kittanning
Mc Gees
Manorville
Rosston
Apollo
Indiana
Spangler
Penn Run
Homer City
Blacklick Sta.
Saltsburg
Derry
Latrobe
Greensburg
Irwin
Wilkinsburg
PITTSBURG
Allegheny
Mc Keesport
Braddock
Turtle Creek
Wilmerding
Monongahela
Brownsville
Uniontown
Connellsville
Mt. Pleasant
Scottdale
Mt. Morris
Waynesburg
Carmichaels
Clarksville
Millsboro
Cokeburg
Washington
Canonsburg
Burgettstown
Wellsville
Steubenville
Mingo Junction
Bellaire
Martin's Ferry
Wheeling
Fairmont
Clarksburg
Grafton
Oakland
Kingwood
Morgantown
Point Marion
Fairchance
Smithfield
Uniontown
Alleppo
Oliphant Furnace
Confluence
Somerfield
Ursina
Salisbury
Meyersdale
Beans Cove
Bigler
Tannery
Mercersburg
Roundtop
Gettysburg
Littlestown
Hanover
York
Wrightsville
Columbia
Marietta
Lancaster
Strasburg
Intercourse
Bird in Hand
New Holland
Ephrata
Lititz
Manheim
Mt. Joy
Elizabethtown
Middletown
Harrisburg
Steelton
Hummelstown
Cornwall
Lebanon
Mt. Gretna
Womelsdorf
Robesonia
Reading
Birdsboro
Temple
Wernersville
Sinking Spring
Shillington
Leesport
Hamburg
Shoemakersville
Kutztown
Topton
Barto
Boyertown
Douglassville
Pottstown
Phoenixville
Norristown
Conshohocken
Manayunk
PHILADELPHIA
Germantown
Chestnut Hill
Frankford
Bristol
Tullytown
Morrisville
Trenton
Lambertville
Princeton
Hightstown
Jamesburg
Freehold
Matawan
Keyport
Perth Amboy
Rahway
Elizabeth
Newark
Jersey City
Hoboken
Paterson
Passaic
Hackensack
Rutherford
Orange
Bloomfield
Montclair
Dover
Morristown
Chatham
Madison
Summit
Plainfield
Somerville
Flemington
Lambertville
Phillipsburg
Easton
Bethlehem
Allentown
Catasauqua
Coplay
Whitehall
Siegfried's Bridge
Northampton
Slatington
Lehighton
Weissport
Jim Thorpe
Mauch Chunk
Tamaqua
Pottsville
Minersville
Schuylkill Haven
Auburn
Port Carbon
Mahanoy City
Shenandoah
Ashland
Girardville
Mt. Carmel
Shamokin
Sunbury
Northumberland
Selinsgrove
Middleburg
Lewisburg
Milton
Watsontown
Danville
Bloomsburg
Berwick
Nescopeck
Hazleton
Beaver Meadow
Jeddo
Drifton
Stockton
Wilkesbarre
Kingston
Plymouth
Nanticoke
Pittston
Duryea
Avoca
Dunmore
Scranton
Carbondale
Honesdale
Hawley
Lackawaxen
Milford
Port Jervis
Matamoras
Montague
Newton
Stanhope
Dover
Boonton
Hackettstown
Washington
Belvidere
Phillipsburg
Riegelsville
Milford
Frenchtown
Lambertville
Trenton
Bristol
Morrisville
Yardley
Doylestown
New Hope
Quakertown
Perkasie
Sellersville
Hellertown
Bethlehem
Nazareth
Bangor
Portland
Delaware Water Gap
Stroudsburg
Saylorsburg
Cresco
Mt. Pocono
Tannersville
Pocono Pines
Mt. Bethel
Portland
Delaware River
Chesapeake & Delaware Canal
Wilmington
S. Chester
Chester
Darby
Media
Lansdowne
Upper Darby
Germantown
Camden
Gloucester
Salem
Bridgeton
New Castle
Odessa
Middletown
Elkton
Port Deposit
Havre de Grace
Aberdeen
Perryville
Belair
Westminster
Hampstead
Manchester
Hanover
Gettysburg
Emmitsburg
Frederick
Brunswick
Myersville
Harpers Ferry
Martinsburg
Hagerstown
Williamsport
Cumberland
Krug
Romney
Charlestown
Washington Jc.
Elliott City
BALTIMORE
Susquehanna River
Juniata River
Allegheny River
Monongahela River
Ohio River
Delaware River
Chesapeake Bay
Lake Erie
Lake Chautauqua
Allegheny Mts.
Kittatinny Mts.
Blue Mtn.
Tuscarora Mtn.
Jacks Mtn.
Shamokin Mtn.
Broad Top Mtn.
Sideling Hill
Tuscarora Valley
Cumberland Valley
Lehigh Valley
Wyoming Valley
Lackawanna Valley
Susquehanna Valley
Juniata Valley
Kittatinny Valley
Great Valley
Pocono Plateau
Appalachian Mts.
Blue Ridge
South Mountain
Catoctin Mts.
Piedmont Plateau
Atlantic Coastal Plain
611
R. MCN. & CO., ENG'RS CHI.

MARYLAND. Mär-re-land. "Old Line State."

Named in honor of Henrietta Maria, Queen of Charles I of England.

Historical.—Seventh of the thirteen original States; ratified the Federal Constitution, April, 1788. Charter issued to Lord Baltimore, June 20, 1632, remained in force until 1776. First permanent settlement made at St. Mary's, 1634; colony noted for its religious toleration. Annapolis founded by Puritan refugees, 1649; Baltimore settled, 1730. State Constitutions adopted, 1776, 1851, 1864, and 1867.

Area.—Total area, 12,210 square miles; land, 9,860; water, 2,350; length, east to west, 196 miles; breadth, 9 to 120 miles; counties, 24.

Physical Features.—State naturally divided in three sections: Mountainous region of Western Maryland; hilly country, Northern and Central Maryland; level areas of Eastern and Southern Maryland. Greatest altitude, Great Backbone Mountain, 3,400 feet. Chesapeake Bay divides State in two parts, Eastern and Western Shore. In proportion to area leads in extent of navigable waterways.

Climate.—Mild and generally healthful. Mean annual rainfall at Baltimore, 43.8 inches; mean annual temperature, 55.3 deg.; highest, 102 deg.; lowest, 6 deg. below.

Agriculture.—Tobacco, a staple crop from early colonial days. Eastern Shore seat of peach industry; small fruits, market gardening, and tobacco culture, Western Shore. Farm products, 1900: Corn, 15,232,802 bushels, value $6,245,449; wheat, 15,187,848 bushels, $10,783,372; oats, 1,783,416 bushels, $552,859; hay, 302,292 tons, $4,247,208; potatoes, 1,269,455 bushels, $685,506; tobacco, 1899, 24,589,480 pounds, $1,438,169. Value of farm animals, $19,636,844. Wool clip, 1901, 5,556,265 pounds.

Fisheries.—Leads all other States in value of oyster fisheries; over 32,000 persons engaged in oyster industry; capital invested, over $7,000,000; yield, 1899, 7,254,934 bushels; shad and Spanish mackerel most important fish taken. State famous for crabs and diamond-backed terrapin.

Manufactures.—Among the most important are clothing, flour, iron, and steel, and shipbuilding. Iron works opened 1715; sugar refineries, 1784; glass factories, 1789. Foremost State in canning industry, has over 500 establishments; leads in tomatoes. Has 700 tobacco, cigar, and cigarette factories; tobacco, 1900, 12,348,971 pounds; cigars, 403,548,626; cigarettes, 1,428,041. Ranks first in manufacture of fertilizers. Pig iron, 1900, 290,073 tons. Value brick and tile, $1,275,239.

Minerals.—Coal area, 550 square miles. Output, 1900, 4,024,688 short tons. Value of slate quarried, $128,673; roofing slate, $126,271. Value of granite, $486,822; value of limestone, $317,207. Marble, $70,000.

Population.—Ranked sixth in 1790; twenty-sixth in 1900. Total population, 1790, 319,728; 1890, 1,042,390; 1900, 1,190,050. Male, 589,275; female, 598,769; native, 1,094,110; foreign, 93,934; white, 952,424; colored, 235,620; African, 235,064; Chinese, 544; Japanese, 9; Indians, 3.

Cities.—*Baltimore*, "Monument City," metropolis and seaport; principal manufacturing center; large export trade, and oyster fisheries. Population, 1900, 508,957. *Annapolis*, "City of Anna," Queen Anne, capital and port of entry; population, 8,402. *Cumberland*, second city, important railroad terminus and manufactures; population, 17,128.

Railroads.—Baltimore & Ohio road begun 1828. 1830, 15 miles of road; 1840, including District of Columbia, 213 miles; 1860, 386; 1870, 671; 1885, 1,159; January, 1892, 1,269; July, 1900, 1,376.18.

Education.—Public school enrollment, 1899-00, 345,350; white, 268,060; colored, 72,290; expenditures, $2,912,527; school age, 6-21; text-books furnished. Johns Hopkins University and Peabody Institute, State Normal School, and Woman's College of Baltimore, at Baltimore; United States Naval Academy, established 1845, Annapolis.

Political.—State, congressional, and presidential elections, Tuesday after first Monday in November. Number of Senators, 25; Representatives, 91; electoral votes, 8. Voters must be actual citizens, residents of State 1 year, county 6 months; registration required; ballot reform.

Legal Holidays.—January 1, February 22, Good Friday, May 30, July 4, first Monday in September, general election day, Thanksgiving, December 25, and every Saturday afternoon.

Legal.—Statutes of limitation: Judgments, 12 years; notes and open accounts, 3 years; redemption of tax sales, 1 year; legal interest rate, 6 per cent.

DELAWARE. Del'a-war. "Blue Hen State."

Named in honor of Lord de la War, Governor of Virginia.

Historical.—First of the thirteen original States to adopt and ratify the Constitution; ratification December 7, 1787. First permanent settlement made by Swedes near present site of Wilmington, 1638; Swedish settlements captured by Dutch, 1655; Dutch conquered by English, 1664. Territory included in the grant given to William Penn, 1681. In 1703 the "Three Lower Counties" were recognized as a separate colony under the Governor of Pennsylvania. State Constitution formed 1776, new one adopted 1792; twice amended, 1831 and 1897.

Area, 2,360 square miles or 1,254,400 acres; land, 1,960 square miles; water, 400; extreme breadth, 36 miles; length, 110; counties, 3.

Physical Features.—Surface generally level but hilly in the north; greatest altitude, Dupont, 282 feet. One-twentieth of surface composed of tidal marshes, partly reclaimed. Chief river, Delaware. Government Breakwater, Delaware Bay, begun 1828, has cost $2,721,992.

Climate.—Peninsula almost surrounded by Chesapeake and Delaware bays and Delaware River. Climate, greatly modified by the surrounding waters, is mild; winters short. Annual temperature at Wilmington, 53 deg.; highest temperature, 98 deg.; lowest, 1 deg.; annual rainfall at Delaware Breakwater, 32.6 inches.

Agriculture.—Soil and climate especially adapted for agricultural pursuits. Market gardening and the growing of peaches and small fruits for Northern markets leading industries. Annual value of peach crop alone equals $3,000,000. Production and value of cereals, etc., 1900: Corn, 5,010,312 bushels, value $1,903,919; wheat, 1,479,139 bushels, $1,035,397; oats, 332,724 bushels, $99,817; potatoes, 256,512 bushels, $153,907; hay crop, 44,441 tons, $619,952. Total value of farm animals, 1900, $4,111,054. Wool clip, 1901, 34,820 pounds.

Manufactures center chiefly at Newcastle and Wilmington. Principal industries: Shipbuilding, manufactures of iron and steel, leather, cars, flour, and cotton goods. Number of establishments reported in 1900, 9,880; capital, $163,422,260; value of entire product, $242,752,990. In 1901, Delaware, Maryland, and District of Columbia produced 5,236,946 gallons of distilled spirits. There are numerous canneries for fruit, vegetables, etc.; peas and oysters packed extensively.

Population.—Population, 1890, 168,493; 1900, 184,735. Male, 94,158; female, 90,577; native, 170,925; foreign, 13,810; white, 153,977; colored, 30,758; Africans, 30,697; Chinese, 51; Japanese, 1; Indians, 9.

Cities.—*Wilmington*, metropolis, has extensive manufactures of cars and car wheels, paper, cotton, and machinery; excellent harbor, and large yards for iron and steel shipbuilding. Noted Dupont Gunpowder Works six miles distant. Population, census of 1900, 76,508. *Dover*, the capital, has large canning factories and manufactures; population, 1900, 3,329. *New Castle*, port of entry, has important cotton, woolen, and iron manufactures; population, 3,380.

Railways.—In 1835, State had 16 miles of road; 1855, 56; 1865, 134; 1875, 272; 1885, 303; January 1, 1892, 320; July, 1900, 346.72. Delaware & Chesapeake Canal, 13½ miles long; finished, 1829.

Education.—Public school enrollment for 1892, 48,370; school age, 6–21; expenditure, 1889-90, $275,000. Text books furnished. Separate system of schools provided for colored children. Among various educational institutions are: Delaware College, Newark; Ferris Industrial School, Marshalltown; Wesleyan Female College, Delaware Industrial School for Girls, and Public Normal School, Wilmington.

Political.—Number of Senators, 9; Representatives, 21; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 3. Voters must be actual citizens and county taxpayers, residents of State 1 year, county and town 1 month, precinct 15 days. No registration; ballot reform. Idiots, insane, paupers, and criminals excluded. Women may vote on school matters.

Legal Holidays.—January 1, February 22, May 30, July 4, first Monday in September, Thanksgiving, December 25. Notes due on any holiday must be paid the preceding day.

Legal.—Statutes of limitation: Judgments, 20 years; contracts not under hand, book accounts, 3; bills, notes under hand, 6. Legal interest rate, 6 per cent.

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NEW JERSEY. Nū-Jer'-zee.

"Sharp Backs State."

Named after the Isle of Jersey.

Historical.—One of the thirteen original States; became a member of the Union December 18, 1787; third of the States in point of order to ratify United States Constitution. Earliest settlements made by Dutch at Bergen, 1617-20; settlement made by Swedes on Delaware River, 1683; Fort Nassau on Delaware erected by Dutch, 1655, who compelled Swedes to acknowledge their rule; country passed to English with New York, 1664. Became a royal province, 1702. Scene of numerous battles of the Revolution, 1777-8, State bearing a most patriotic part during the war. State Constitution adopted, 1776; present Constitution, 1844.

Area.—Total area, 8,175 square miles, divided into 21 counties; land area, 7,815 square miles; water, 290; extreme length north to south, 167 miles; average breadth, 50.

Physical Features.—Northwestern part of State traversed by Kittatinny, or Blue Ridge, and Highland ranges of Appalachian system; altitude 1,000 to 1,750 feet above sea level; highest elevations in the Kittatinny range, which extends continuously from extreme north to Delaware Water Gap. Highland range comprises numerous detached ridges, the surface of which varies greatly. Central part of State somewhat rolling; southern, largely a sandy plain, sloping to the sea and partly covered with pine forests. Besides the Hudson—locally, North River—the Delaware, forming most of the western boundary, the most important river; eastern sections of State drained by streams flowing directly into Atlantic; western, by tributaries of Delaware River and Bay. Coast line, 120 miles, including bays, 540. Tidal streams along eastern shore, from Sandy Hook to Cape May, afford important inland navigation and safe harbors for light draught vessels; Hudson River and Raritan, Newark, and New York bays provide good harbors in the northeast. Points of interest: Passaic Falls, Delaware Water Gap, mineral springs at Schooley's Mountain, many seaside resorts along the Atlantic Coast, and numerous small but beautiful lakes in the northern highlands.

Climate temperate; southern part of State influenced by ocean; seashore healthful; Cape May to Sandy Hook a succession of noted summer resorts; Lakewood, near Trenton, famous winter resort. Mean annual rainfall, Atlantic City, 42.7 inches. Temperature, 51.9 deg.; highest, 99 deg., lowest, 7 deg. below.

Agriculture, Etc.—Agriculture a leading industry; engages about 15 per cent of population. Market gardening and floriculture flourish. South well adapted to raising of grapes and small fruits. State especially noted for its sweet potatoes—yield averages over 2,000,000 bushels per year—cranberries, vegetables, and small fruits. Productions and values, 1900: Corn, 8,493,012 bushels, $3,821,855; wheat, 2,344,582 bushels, $1,734,991; oats, 2,812,089 bushels, $871,748; white potatoes, 3,342,015 bushels, $2,005,209; rye, 1,029,000 bushels, $565,950; buckwheat, 160,080 bushels, $94,447; hay, 499,102 tons, $8,010,587; cranberries, 1899, 240,221 bushels.

Live Stock.—Number and value of farm animals, June, 1900: Horses, 94,024, value, $7,582,274; mules, 4,931, value, $356,492; milch cows, 157,407, value, $5,840,288; other cattle, 82,577, value, $1,358,879; sheep, 47,730, value, $202,480; swine, 175,387, value, $926,179. Total value live stock, $17,612,620. Wool clip, 1901, 131,815 pounds.

Fisheries.—Mostly deep sea. Menhaden and anchovy abound; food fish taken include bluefish, sheepshead, Spanish mackerel, and many fresh-water fish; shad fisheries of New Jersey among the most important in the Union. State has many oyster beds; most important, those in Newark, Raritan, Barnegat, and Delaware bays. Bushels of oysters marketed, 1898, 1,342,021, value, $1,309,411.

Manufactures important. In silk industry State leads all others in investments and in products. Higher grades of silk manufactured almost exclusively in New Jersey. Number of silk factories, 1900, 180. Capital nearly $30,000,000; number of persons employed, 25,116; wages paid, $9,232,532, value of output, $39,966,662, an increase of $9,200,000 in a decade. In 1900, 15,481 manufacturing establishments reported an invested capital of $502,824,082; value of materials used, $360,945,843; value of goods produced, $611,748,933; wages paid, $129,777,551. Capital and value of products of reported manufacturing establishments, 1900: Brewing, $27,014,496, value $15,513,035; foundry and machine products, $31,550,687, value, $32,621,229; woolen and worsted, $16,630,519, value, $11,579,114, cotton goods, including small wares, $14,399,291, value, $6,930,766; capital, iron and steel industries, $19,971,609; products, $24,381,699; rubber goods, hard and soft, $6,078,155, value, $8,458,274; leather, $9,906,119, value $13,747,155; value of oil refined, ranking second, $29,649,460; shoes, $3,153,255, value $6,978,043. Dyeing and finishing textiles, $11,600,695; value, $10,488,963. In 1900 ranked third clay-working State. Number of operating firms reporting, 149; value of product, $10,928,423. Production of common brick, 331,579,000, value, $1,449,694; pressed brick, 25,299,000, value, $426,692. Value of pottery produced, $3,826,948, tile, $508,392. State ranks second in production of Portland cement; output, 1898, 587,163 barrels, value, $1,027,535. Number of tobacco factories, 1900, 49; cigar factories, 893; combined output, calendar year, 116,285,085 cigars, 962,090 cigarettes, 6,058,400 pounds of plug tobacco, 4,313,623 pounds fine cut, 7,925,608 pounds of smoking, and 4,182,573 pounds of snuff. Output of pig iron, 1900, 170,262 long tons; a year's increase of nearly 45,000 tons.

Minerals abundant; iron and zinc ores, green sand, glass sand, fire and pottery clays worked. In 1900 State ranked third in production of magnetite iron; total iron output, 344,247 long tons, value, $956,711. Output manganiferous zinc residuum, 87,110 long tons, value, $34,844. Value of granite output, $1,170,555; of this, $649,021 represents value of trap rock. Total value of limestone, $170,006; sandstone, $198,234. Production of raw clay, $440,874. Mineral springs reporting, 9; product, 525,500 gallons, value of waters, $207,135.

Population.—State ranked ninth in population in 1790, thirteenth in 1820, nineteenth in 1850, twenty-first in 1860, eighteenth in 1890, and sixteenth in 1900. Total population, 1790, 184,139; 1820, 277,575; 1850, 489,555; 1860, 672,035; 1890, 1,444,933. Population, 1900, 1,883,669. Classification: Male, 941,760; female, 941,909; native, 1,451,785; foreign, 431,884; white, 1,812,317; colored, 71,352; Africans, 69,844; Chinese, 1,393; Japanese, 52; Indians, 63.

Cities.—*Newark*, metropolis, important railway and manufacturing center; port for foreign and coasting trade; population, census of 1900, 246,070. *Jersey City*, second in size; terminus of railway and steamship lines; has large tobacco manufactories; population, 206,433. *Paterson*, "Lyons of America," third; noted for manufactures of silk; other prominent manufactures are cotton and woolen goods, iron, steel and foundry and machine shop products; population, 105,171. *Camden*, flourishing center of manufactures and ship building; population, 75,935. *Trenton*, capital; leading industry, manufacture of clay products; has extensive rolling and woolen mills, iron and tool works, and rubber and chain factories; population, 73,307. *Hoboken*, 59,364.

Railways.—State had 99 miles of road in 1835; 186, 1840; 560, 1860; 1,125, 1870; 1,684, 1880; 2,099, 1890; January, 1901, 2,242. Number of miles of railway to each 36 square miles of territory, 10.33; number of miles to each 10,000 inhabitants, 11.89.

Education.—Public school enrollment, 1899, 478,960; average daily attendance, 203,000; total expenditure, $6,142,520; value public school property, $15,846,124; school age, 5-20; compulsory school age, 7-15; text-books furnished. Public high schools, 1899-00, 96; private secondary schools, 74. Princeton University—opened at Elizabethtown, 1747—Princeton; Rutgers College, New Brunswick; Seton Hall College, South Orange; Bordentown Female College, at Bordentown; Normal Schools, Newark, Paterson, and Trenton. Industrial School for Girls, Trenton. Baron de Hirsch Agricultural and Industrial School, Woodbine, opened, 1894.

Political.—State elections annual. State, congressional, and presidential elections, Tuesday after first Monday in November; number of Senators, 21; Representatives, 60; sessions, annual, meeting, second Tuesday in January, limit of session, none; term of Senators, 3 years; Representatives, 1 year Number of electoral votes, 10. Term of Governor, 3 years; salary, $10,000 annually. Voters must be actual citizens, residents of State, 1 year, county, 5 months; registration required. Official ballot in envelope, each party having a ticket. Paupers, idiots, insane, and convicts excluded. Limited woman suffrage.

Legal Holidays.—January 1, February 12 and 22, May 30, July 4, first Monday in September, general election day, Thanksgiving, December 25, and every Saturday afternoon.

Legal.—Statutes of limitation: Judgments, 20 years; mortgage notes, sealed contracts, 16; contracts not under seal, 6; notes and open accounts, 6 years; redemption of tax sales, 1 year. Legal interest rate, 6 per cent.

Longitude West from Greenwich.
75° 30'
75°
74° 30'
74°
WILKESBARRE
Scranton
Carbondale
Honesdale
Tunkhannock
Wyoming
Creseo
Gravel Place
Tannery
Stroudsburg
Saylorsburg
Pohopoko
Manchunk
Lehigh Mts.
Bangor
Belvidere
Martins Cr.
Oxford
Washington
Broadway
Walnutport
Phillipsburg
Easton
Blue Mts.
Allentown
Emaus Jc.
Albanus Jc.
Riegels V.
Bartes
Quakertown
Reading
New Hope
Doylestown
Titus
Wilburtha
Newtown
Birdsboro
Pottstown
Schuylkill
Lansdale
Phoenixville
Norristown
Conshohocken
Downingtown
Newtown Sq.
West Chester
PHILADELPHIA
Bridesburg
Frankford Jc.
Torresdale
Pennypack
Holmesburg Jc.
Andalusia
Pedrick
WILMINGTON
Delaware R.
Delaware Bay
New Castle
Harrisonville
Pennsville
Woodstown
Penwick
Salem
Elmer
Riddleton
Alloway Jc.
Quinton
Canton
Finley
Bridgeton
Townsend
Greenwich
Fairton
Bayside
Cedarville
Newport
Smyrna Sta.
Clayton
Dividing Creek
Maurice River
Millville
Menantico
Manumuskin
Port Elizabeth
Port Norris
Dennisville
Seaville
Goshen
Swain
Cape May
Cape May Pt.
DELAWARE BAY
Maurice River
Tuckahoe
Maurice River
Dividing Creek
Delaware
Maryland
Virginia
Montague
Colesville
Quarryville
Harrison
Haines ville
Bevans
Becker Jc.
Branchville
Hamburg
Franklin Furnace
Vernon
Lake Ile
Sterling Forest
Greenwood Lake
Greenwood
Newburgh
Goldenbridge
Ringwood Jc.
Ringwood
Midvale
Ramapo
Allen dale
Pompton
Butler
Wharton Jc.
Wharton
Mount Hope
Ogdensburg
Franklin
Edenville
Green
Lakeside
Hurdtown
Andover
Hainesburg
Columbia
Delaware
Manunka Chunk
Hackettstown
Mt. Hope
Waterloo
Allamuchy
Stanhope
Netcong
Landing
Port Morris
Mt. Arlington
Lake Hopatcong
Hibernia
Rockaway
Denville
Dover
Mine Hill
Wharton
Boonton
Montville
Pine Brook
Singac
Little Falls
Paterson
Passaic
Clifton
Arlington
Kearny
Harrison
Jersey City
Hoboken
New York
Brooklyn
Long Island
Long Island Sound
Port Washington
Whitestone
Flushing
Bloomfield
Glen Ridge
Montclair
Upper Montclair
Watchung
Orange
East Orange
Newark
Elizabeth
Elizabeth Port
Staten Island
Bayonne
Constable Hook
Kill Van Kull
Arthur Kill
Rahway
Linden
Roselle
Roselle Park
Elizabeth
Summit
Chatham
Madison
Morristown
Convent
Whippany
Hanover
Hanover Hill
Essex Falls
Caldwell
Tabor
Parsippany
Troy
Troy Hills
Denville
Rockaway
Hibernia
Wharton
Mount Arlington
Lake Hopatcong
Stanhope
Netcong
Landing
Port Morris
Mt. Arlington
Succasunna

WEST VIRGINIA. Vir-jin'-e-a. "Little Mountain."

Historical.—State formed from western and northwestern parts of Virginia, which rejected the ordinance of secession of April 17, 1861. Representatives from forty counties, repudiating ordinance, met in convention at Wheeling, June 11, and organized a State Government. Provision made for a new State to be called Kanawha. Constitutional convention met at Wheeling, Nov. 24. Name of proposed State changed to West Virginia, Dec. 3. Constitution ratified by people, May 3, 1862; consent of legislature given for formation of new State, May 13. West Virginia admitted into the Union, June 20, 1863. Seat of government at Wheeling until April, 1870; Charleston until 1875; Wheeling until 1885, when Charleston again became the capital.

Area.—Total area, 24,780 square miles; land, 24,645; water, 135; extreme length, 240 miles; breadth, 160. Counties, 55.

Physical Features.—Surface largely mountainous or hilly; State traversed by numerous parallel ranges of Appalachian system; greatest altitude, Spruce Mountain, 4,860 feet. Country slopes westward to Ohio River which forms navigable boundary for 300 miles; with exception of Potomac, forming part of boundary between the State and Maryland, and its affluents, rivers all tributary to Ohio. The numerous streams furnish valuable water-power and some inland navigation. State famed for beauty and grandeur of its mountain scenery and valuable mineral springs.

Forests.—Total wooded area, 18,400 square miles; comprises about 73 per cent of land area. Timber noted for its magnificent size, excellent quality, and great variety, especially of hardwoods. Chief among hardwoods are oaks, black walnut, and cherry; oaks most plentiful, covering about one-third of total area. Forests of white pine and spruce on mountain ranges. Timber product, 1894: Poplar, 125,000,000 feet; hardwood, 75,000,000; spruce, 50,800,000; several million feet of pine. Estimated merchantable standing timber, 1900, 900,000,000 feet, board measure. Besides timber, forest products include sumach, tanner's bark, charcoal, and valuable medicinal plants.

Climate agreeable and healthful without great extremes. Winters generally short and not severe; summers long; heat of valleys modified by general elevation of surface. Mean annual rainfall at Parkersburg, 42.0 inches; mean annual temperature, 53.9 deg.; highest, 99 deg.; lowest, 11 deg. below.

Agriculture.—Agricultural resources extensive. State contains large areas of arable land. Corn the leading crop of the State, wheat next in value. Tobacco an important crop; large areas especially adapted to the culture. Grapes, apples of superior quality, peaches, pears, plums, and all small fruits do well. In 1897, farms occupied 10,321,326 acres; area under improvement, 4,554,000 acres; estimated value products, $14,717,866. Yield and value of farm products, 1900: Corn, 19,299,708 bushels, value, $9,649,854; wheat, 4,452,895 bushels, $3,428,729; oats, 2,768,451 bushels, $941,273; rye, 127,796 bushels, $81,789; white potatoes, 3,029,120 bushels, $1,544,851; hay, 547,630 tons, $7,337,840; buckwheat, 223,958 bushels, $125,416; tobacco, 1898, 3,685,680 pounds, value, $313,283.

Farm Animals.—Live stock interests extensive, State particularly adapted to stock raising, especially to the raising of sheep. Finest grazing region in the valley of the Kanawha River. Blue grass indigenous in many counties, other natural grasses cover hill and mountain slopes. Number of mules, asses, and burros, 1900, 11,470, value, $740,368; cattle, 639,782, value, $14,058,427; sheep, 968,843, value, $2,664,556; hogs, 442,844, value, $1,389,808. Wool noted for its superior quality; wool clip, 1901, 2,326,500 pounds. Dairy interests advancing rapidly.

Manufactures.—Abundant water-power, timber, and minerals afford excellent natural advantages for manufacturing industries. Manufactures include iron and steel products, glass, pottery, leather, cotton and woolen goods, lumber, tobacco, wagons and carriages, canned goods, etc. In July, 1900, State had 23 cotton looms, 296 woolen looms, and 472 wool knitting machines. In 1898, woolen industry gave employment to 5,000 people. Output of pig iron, 1901, 166,597 gross tons; all kinds of rolled iron and steel, 1898, 198,883 long tons. State ranks second in production of coke; coking coal among the most valuable in the world; product, 1900, 2,358,499 short tons, value $4,746,633; establishments, 106; ovens, 10,249; coal used for coke, 3,868,840 short tons. Value of all clay products, 1900, $1,451,239; operating firms reporting, 55. Number of common and pressed brick made, 105,370,000, value, $725,658, vitrified, 53,492,000, value, $474,880; value of pottery, $631,841. Number of tobacco manufactories, 1900, 26; cigar, 138; combined output, 90,131,934 cigars, and 4,145,032 pounds of manufactured tobacco, chiefly smoking.

Minerals.—Coal, excellent and abundant. Area of deposits, 16,000 square miles. State ranks third in production. Most important fields Fairmont and Elk Garden in northern and Pocahontas and New and Kanawha River fields in southern part of State. Coal output, 1900, 22,647,207 short tons, value, $18,416,871; number of mines, 265; employes, 23,625. Oil fields vast and rich. State ranks second in country. Mannington, Wood County, Sistersville, and Ritchie County fields most important. Total output, 1900, 16,195,675 barrels, value, $21,922,702. Production has increased over 500 per cent since 1891. State ranks third in production of natural gas. Chief producing counties, Wetzel, Marion, Monongalia, Harrison. Wells producing, close of 1900, 420; value of output, $2,959,032; increase in value as compared with 1899, 26 per cent. Valuable deposits of iron ores, limestone, and sandstone; sandstone, used largely for bridge work. Value of limestone output, 1900, $53,701; sandstone, value, $65,615. Salt springs in valleys of Ohio and Kanawha rivers. Output of salt, 1900, 248,873 barrels, value, $118,467. Total number of mineral springs, 6; value of waters, $10,723. Black marble, glass sand, valuable clays, saltpeter, ochre, and bromine found.

Population.—State ranked twenty-seventh in 1870; twenty-ninth in 1880; twenty-eighth in 1890 and 1900. Total population 1870, 442,014; 1880, 618,457; 1890, 762,794; 1900, 958,800. Classification: Male, 499,242; female, 459,558; native, 936,349; foreign, 22,451; white, 915,283; colored, 43,567; Africans, 43,499; Chinese, 56; Indians, 12.

Cities.—*Wheeling*, metropolis and former capital, settled 1774; leading industrial and commercial center of State; noted for its nail factories and has large tobacco works, blast furnaces, and breweries; population, 1900, 38,878. *Huntington*, second city in size, has petroleum refineries and manufactures; lumber interests extensive; population, 11,923. *Parkersburg*, center of petroleum industry; has oil refineries, iron foundries, lumber mills, and machine shops; population, 11,703. *Charleston*, capital, center of rich agricultural district and outlet for an important mining territory; population, 11,099.

Railways.—Mileage, 1850, 97; 1860, 352: 1870, 576; 1880, 691; 1891, 1,547; June, 1896, 2,063.70; January, 1901, 2,456; number of miles to each thirty-six square miles 3.57.

Education.—Public school enrollment, 1899-00, 322,390; in 1898-99 was 236,188; average daily attendance, 151,254; teachers, 7,179. Total expenditure, $3,215,321; teachers' salaries, $1,213,491. School age, 6-21; compulsory school age, 8-14; number of public high schools, 32; secondary students, 1,955; elementary, 112. Private secondary schools, 13; secondary students, 965; elementary, 581. West Virginia University, Morgantown, founded 1867. Bethany College, Bethany; Barboursville College, Barboursville. Public normal schools, Athens, Fairmont, Farm (colored), Glenville, West Liberty, Huntington, and Shepherdstown. Private normal schools, Fayetteville, Harpers Ferry, and Summersville. School for Deaf and Blind, Romney; Reform school, Pruntytown; Bluefield Colored Institute, Bluefield.

Political.—State elections quadrennial. Congressional and presidential elections, Tuesday after first Monday in November. Number of Senators, 26; Representatives, 71; sessions, biennial; meets second Wednesday in January; limit of session 45 days; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 6. Term of Governor, 4 years; salary, $2,700. Voters must be actual citizens, residents of State 1 year, county, 60 days; registration prohibited. Lunatics, paupers, idiots, convicts, bribers, United States soldiers and sailors excluded.

Legal Holidays.—January 1, February 22, May 30, July 4, first Monday in September, general election day, Thanksgiving, and December 25.

Legal.—Statutes of limitation: Judgments, 10 years; open accounts, 5; notes, 10; redemption of tax sales, 1 year; sales in alternate years. Legal interest rate, 6 per cent; higher rate to corporations.

Longitude West from Greenwich.
82°
81°
80°
79°
78°
PENNSYLVANIA
MARYLAND
OHIO
KY.
VIRGINIA
WEST VIRGINIA.
SCALE OF STATUTE MILES.
0 10 20 30 40 50
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NORTHERN PORTION OF WEST VIRGINIA.
CHARLESTON
Parkersburg
Huntington
Wheeling
Bellaire
Zanesville
Cumberland
Hagerstown
Chambersburg
Greenbrier R.
Kanawha R.
Ohio R.
Monongahela R.
Potomac R.
Shenandoah R.
Blue Ridge
Alleghany Mts.
Cumberland Mts.
North Mts.
South Mts.
Shenandoah Mts.
Staunton
Roanoke
Pearisburg
Clintwood
Pikeville
Grundy
Oak Hill
Ripley
Gallipolis
Ironton
Portsmouth
Ashland
Lexington
Maysville
Mt. Sterling
Winchester
Strasburg
Front Royal
Warrenton
Culpeper
Orange
Charlottesville
Alberene
Lexington
Goshen Br.
Hot Springs
Sulphur Spgs.
Clifton Forge
Eagle Rock
Oreville
Covington
Iaeger
Welch
Princeton
Bluefield
Pocahontas
Graham
Tazewell
Richlands
Abingdon
Bristol
Wytheville
Radford
Christiansburg
Lynchburg
Amherst
Gordonsville
Fredericksburg
Washington
Alexandria
Leesburg
Harpers Ferry
Martinsburg
Hancock
Cumberland
Frostburg
Piedmont
Keyser
Romney
Petersburg
Moorefield
Harrisonburg
Elkton
Luray
Brandywine
Franklin
Oakhat
Seybert
Ruddle
Horton
Circleville
Gillespie
Mt. Jackson
New Market
Edinburg
Woodstock
Toms Brook
Middletown
Winchester
Berryville
Shepherdstown
Charles Town
Kearneysville
Ranson
Harpers Ferry
Point of Rocks
Brunswick
Knoxville
Waterford
Lovettsville
Purcellville
Hamilton
Leesburg
Middleburg
Upperville
Paris
Rectortown
Marshall
Warrenton
Sperryville
Flint Hill
Luray
Stanley
Shenandoah
Elkton
Grottoes
Waynesboro
Fishersville
Staunton
Verona
Middlebrook
Swoope
Buffalo Gap
Churchville
Augusta
Romney
Capon Springs
Capon Bridge
Ridgeley
Green Spring
Paw Paw
Hancock
Williamsport
Hagerstown
Boonsboro
Keedysville
Sharpsburg
Antietam
Smithsburg
Clear Spring
Funkstown
Berkeley Springs
Hedgesville
Martinsburg
Inwood
Falling Waters
Williamsport
Mercersburg
Chambersburg
Fayetteville
Greencastle
Scotland
Mont Alto
Waynesboro
Quincy
Mercersburg
Fannettsburg
McConnellsburg
Hancock
Bedford
Everett
Schellsburg
Bloody Run
Hyndman
Berlin
Somerset
Stoystown
Jennerstown
Johnstown
Conemaugh
Mineral Point
Ebensburg
Carrolltown
Loretto
Cresson
Gallitzin
Altoona
Hollidaysburg
Tyrone
Bellwood
Martinsburg
Tipton
Williamsburg
Huntingdon
Mt. Union
Shade Gap
Orbisonia
Three Springs
Fort Loudon
Mercersburg
Chambersburg
Shippensburg
Newville
Carlisle
Mechanicsburg
Harrisburg
Middletown
Hummelstown
Palmyra
Lebanon
Annville
Myerstown
Womelsdorf
Robesonia
Reading
Hamburg
Kutztown
Fleetwood
Boyertown
Douglassville
Pottstown
Phoenixville
Norristown
Conshohocken
Manayunk
Philadelphia
Chester
Media
Wilmington
Newark
Elkton
Oxford
Kennett Square
West Chester
Coatesville
Downingtown
Parkesburg
Lancaster
Columbia
Marietta
Mount Joy
Elizabethtown
Middletown
Hummelstown
Harrisburg
Dauphin
Duncannon
Newport
Millerstown
Perry
Landisburg
Bloomfield
Liverpool
New Bloomfield
Duncannon
Port Royal
Mifflin
Lewistown
Reedsville
Belleville
McVeytown
Mount Union
Huntingdon
Alexandria
Petersburg
Birmingham
Tyrone
Bellwood
Hollidaysburg
Williamsburg
Martinsburg
Tipton
Altoona
Gallitzin
Cresson
Loretto
Carrolltown
Ebensburg
Mineral Point
Conemaugh
Johnstown
Stoystown
Jennerstown
Somerset
Berlin
Bedford
Everett
Schellsburg
Bloody Run
Hyndman
McConnellsburg
Fannettsburg
Chambersburg
Greencastle
Scotland
Mont Alto
Waynesboro
Quincy
Mercersburg
Fayetteville
Shippensburg
Newville
Carlisle
Mechanicsburg
Harrisburg
Middletown
Hummelstown
Palmyra
Lebanon
Annville
Myerstown
Womelsdorf
Robesonia
Reading
Hamburg
Kutztown
Fleetwood
Boyertown
Douglassville
Pottstown
Phoenixville
Norristown
Conshohocken
Manayunk
Philadelphia
Chester
Media
Wilmington
Newark
Elkton
Oxford
Kennett Square
West Chester
Coatesville
Downingtown
Parkesburg
Lancaster
Columbia
Marietta
Mount Joy
Elizabethtown
Middletown
Hummelstown
Harrisburg
Dauphin
Duncannon
Newport
Millerstown
Perry
Landisburg
Bloomfield
Liverpool
New Bloomfield
Duncannon
Port Royal
Mifflin
Lewistown
Reedsville
Belleville
McVeytown
Mount Union
Huntingdon
Alexandria
Petersburg
Birmingham

617

DISTRICT OF COLUMBIA.

Named in honor of Christopher Columbus.

Historical.—Federal District and seat of national capital of United States. In 1788-89 Maryland and Virginia ceded 100 square miles for seat of National Congress; territory south of Potomac retroceded to Virginia 1846. Washington laid out 1791; became seat of government 1800; incorporated 1802. Territorial government with elective institutions existed 1871-4. Government by commissioners under Congress substituted 1878. The three commissioners are appointed by the President.

Area.—The total area, 70 square miles; land, 60; water, 10; greatest breadth, 9 miles; length, 10.

Climate.—Generally healthful throughout the District. Summers extremely warm; winters in general mild, though subject to exceptional severity of cold. Mean temperature, spring, 52 deg.; summer, 75 deg.; autumn, 57 deg.; winter, 34 deg.; for the year, 54.5 deg.; highest, 104 deg.; lowest, 14 deg. below. Mean annual rainfall, 43.3 inches.

Population.—Total population, 1800, 14,093; 1890, 230,392. 1900, 278,718. Male, 132,004; female, 146,714; native, 258,599; foreign, 20,119; white, 191,532; colored, 87,186—Africans, 86,702; Chinese, 455; Japanese, 7; Indians, 22.

Washington.—Capital of United States, on Potomac River, at head of navigation. Site for capital chosen 1790. City contains many handsome buildings, among the most notable are various government buildings, National Museum and Smithsonian Institution. Seat of United States Naval Observatory. Population, 1900 (old limits), 218,196. *Georgetown*, now called West Washington, founded 1751; incorporated as a city 1789; incorporated with Washington 1878; population, 1900, 14,549.

Educational.—Public school enrollment, 1899-00, 70,750; white, 45,646; colored, 25,110; expenditure, $1,228,133. School age, 6-18; compulsory school age, 6-15. Educational institutions include Georgetown Univ., Columbian Univ., American Univ., Catholic Univ. of America, and Howard Univ. (colored)

Legal Holidays.—January 1, February 22, July 4, Thanksgiving, December 25, and every Saturday after 12 o'clock noon.

Legal.—Legal rate of interest 6 per cent; by contract, 10. Statutes of limitation: Judgments, specialties, 12 years, contract debts, 3 years.

VIRGINIA.

Vir-jin'-e-a.
"Old Dominion."

Named in honor of Queen Elizabeth of England. "Virgin Queen."

Historical.—Tenth of the thirteen original States to enter Union. Federal Constitution ratified June, 1788. Oldest successful English colony settled by 105 colonists at Jamestown 1607. Slavery introduced 1619. Became a Crown colony 1624. Jamestown first seat of government; Williamsburg became the capital 1700. Richmond founded 1737; became capital 1779. State bore an active part in the Revolution; scene of closing event—capture of Yorktown and Cornwallis, October 19, 1781. Seceded April 17, 1861. One of chief seats of Civil War; final battle of war occurred at Appomattox, April 8, 1865. State constitution adopted June 29, 1776; remained in force until 1830; present constitution adopted 1869.

Area.—Total area, 42,450 square miles; land, 40,125; water, 2,325; distance east to west, 476 miles; north to south, 192. Counties, 101.

Physical Features.—State level and swampy in southeast; traversed from northeast to southwest by Blue Ridge and other ranges of Appalachian Mountains; highest elevation, Mount Rogers, 4,473 feet. Borders Atlantic Ocean 110 miles; tidal frontage, 1,500 to 2,000 miles. Principal rivers, Potomac, Rappahannock, York, and James. State famed for its mountain resorts and numerous medicinal springs of high repute.

Climate, owing to diversified surface, varying. Mountainous sections, short, severe winters, long, delightfully cool summers; tide-water country, mild winters with less healthful summers and autumns. Mean annual rainfall, Lynchburg, 42.8 inches; mean annual temperature, 57.3 deg.; highest, 102 deg.; lowest, 6 deg. below.

Agriculture, Etc.—State rich in agricultural resources; industry employs one-half laboring population. Principal crop, corn. In 1896 State ranked third in tobacco; leads in production of peanuts; fruits and vegetables largely produced. Productions and value, 1900: Corn, 28,183,760 bushels, value, $13,810,042; wheat, 9,421,932 bushels, $6,783,791; oats, 5,167,568 bushels, $1,912,000; tobacco, 1896, 92,002 acres, 57,961,260 pounds, $3,013,986; hay, 1900, 507,873 acres, 589,133 tons, $7,835,469; potatoes, 38,341 acres, yield 2,223,778 bushels, $1,312,029. Total acreage under cotton, 1899, 35,302, yield 8,000 bales, value $293,669. West of Piedmont Belt State well watered and wooded, affording fine pasturage; number of farm animals, June, 1900, was 2,816,597, value $39,831,552; wool clip, 1901, 1,760,000 pounds. Tide waters of Virginia afford 3,000 miles of fishing shores. Shore fisheries, exclusive of shellfish, etc., average $665,000 annually. Crabbing industry on east shore yields $60,000 annually. State has 204,000 acres of natural oyster beds.

Manufactures.—Growing rapidly in importance. Chief products are: Tobacco, flour, lumber, iron and steel, meat packing, cotton, and leather. Silk industry represented by three factories. State ranks fourth in production of chewing and smoking tobacco. In 1900, 212 tobacco plants gave employment to 11,815: product valued at $21,278,266, or one-sixth of total value of products of State. Cigars, 1900, 334,169,520; cigarettes, 742,933,030; pounds smoking tobacco, 5,449,754; plug, 20,310,152. Value brick and tile manufactured was $1,302,085; pottery, $3,110. Ranks third in manufacture of coke; product, 685,156 short tons, value $1,464,556. Pig iron, 490,617 long tons. Distilled spirits, 1900-01, 248,479 gallons; fermented liquor, 146,535 barrels. Manufactured ice, 1900, 118,240 tons, $417,052.

Minerals.—Among the foremost States in wealth and variety of mineral resources. Coal and iron lead in importance. First reported discovery of coal 1701; first systematic mining in United States in Richmond Basin, output, 1822, 48,214 long tons. Coal area, 2,000 square miles. Output, 1900, 2,393,754 tons, value $2,123,222. Output of iron ore, 921,821 long tons—918,157 tons brown hematite. Salt, copper, gold, lead, zinc, and tin mined to some extent. State has extensive deposits of granite, limestone, sandstone, marbles, and roofing slate. Gray granite of Virginia famed for its beauty and excellence. Value of slate quarried, 1900, $190,211; roofing slate, $174,950; limestone, $403,318; granite, $211,080.

Population.—Ranked first in 1790, 1800, 1810; fourth in 1840, 1850; seventeenth in 1900. Total population in 1790, 747,610; 1840, 1,239,797; 1890, 1,655,980; 1900, 1,854,184. Male, 925,897; female, 928,287; native, 1,834,723; foreign, 19,461; white, 1,192,855; colored, 661,329; Africans, 660,722; Chinese, 243; Japanese, 10; Indians, 354

Cities.—*Richmond*, capital and metropolis, a chief commercial and manufacturing center of South; population, 85,050. *Norfolk*, center of State's foreign commerce; port of Norfolk and Portsmouth important naval station; population, 46,624. *Petersburg*, important center for manufacture and export of tobacco; population, 21,810. *Roanoke*, important manufacturing city; population, 21,495. *Newport News*, a flourishing seaport on Hampton Roads; population, 19,635. *Lynchburg* has numerous industries; large trade in tobacco; population, 18,891.

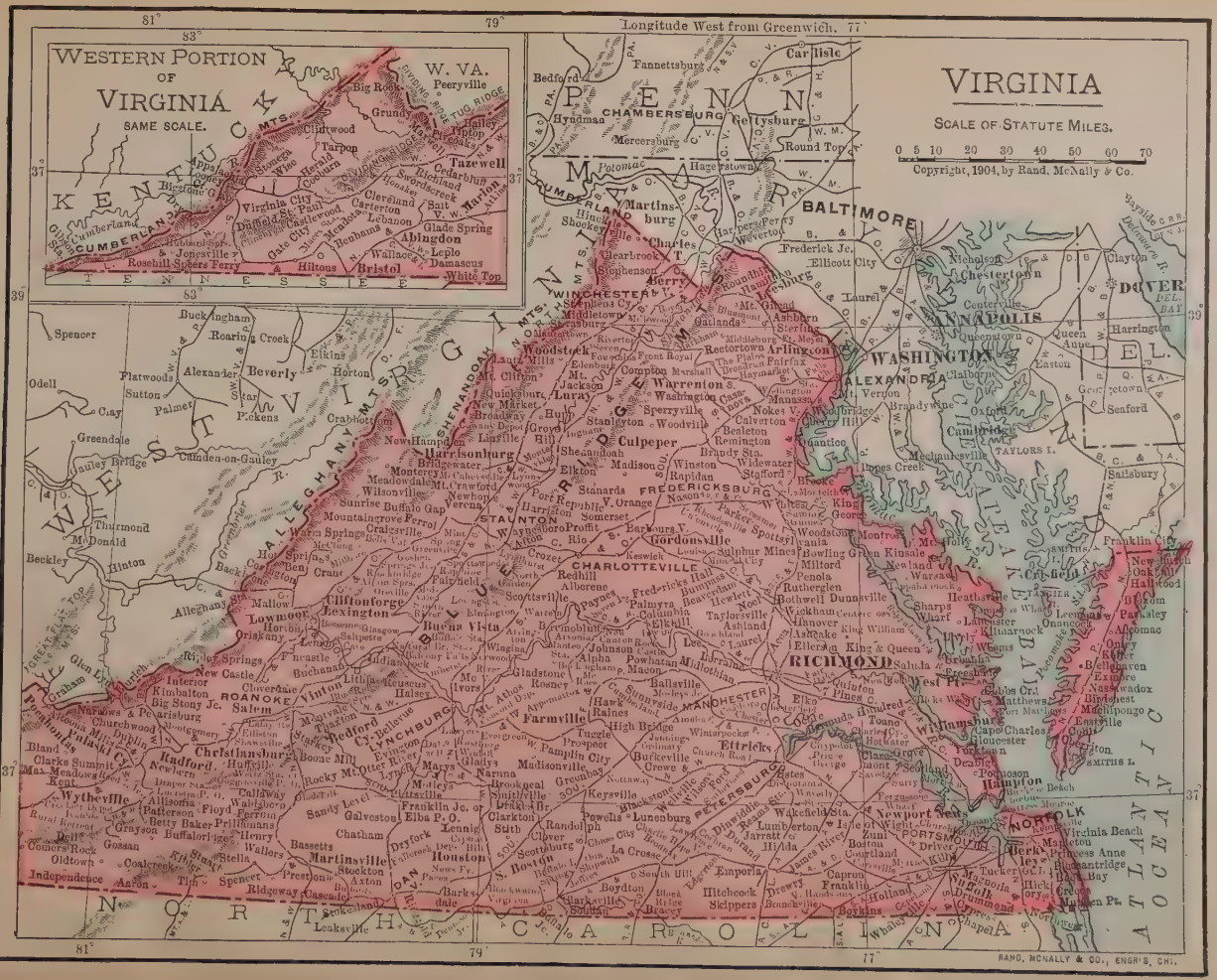
Railways.—First—Petersburg to Weldon, N.C.—chartered 1830. Number miles in operation, 1835, 93; 1840, 147; 1850, 384; 1855, 912; 1860, 1,379; 1870, 1,486; 1880, 1,893; 1885, 2,692; 1890, 3,367; July, 1900, 3,729.05.

Educational.—Public school enrollment, 1900, 626,210; white, 365,890; colored, 260,320; expenditures, $1,971,264, textbooks may be furnished; school age, 5-21. Educational institutions include University of Virginia near Charlottesville; Washington and Lee University, Lexington; William and Mary College, Williamsburg, founded 1692; Randolph-Macon system of colleges, including Randolph-Macon Woman's College; Union and Episcopal Theological Seminaries; Hampton Inst.

Political.—State elections, biennial; State, congressional, and presidential elections, Tuesday after first Monday in November; number of Senators, 40; Representatives, 100; sessions biennial, in odd-numbered years; meets first Wednesday in December; limit of session, 90 days, unless extended by special vote; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 12. Voters must be actual citizens, residents of the State 1 year, county and town 3 months; registration required. Lunatics, idiots, convicts, duelists, and abettors, unless pardoned by Legislature, excluded.

Legal Holidays.—January 1 and 19, February 22, July 4, first Monday in September, Thanksgiving, December 25, Saturday afternoons.

Legal.—Statutes of limitation: Bond contracts under seal, 10 years; written contracts, 5; merchants' accounts, 2; other contracts, 3; redemption of tax sales, no limit. Legal interest rate, 6 per cent.


Longitude West from Greenwich.
81°
79°
77°
VIRGINIA
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60 70
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WESTERN PORTION OF VIRGINIA
SAME SCALE.
W. VA.
PENN.
MD.
KENTUCKY
TENNESSEE
NORTH CAROLINA
WEST VIRGINIA
ATLANTIC OCEAN
Carlisle
Fannettsburg
Bedford
Hyndman
CHAMBERSBURG
Gettysburg
Mercersburg
Round Top
Hagerstown
Martinsburg
Shocker
Harpers Ferry
Weverton
BALTIMORE
Frederick Jc.
Ellicott City
Nicholson
Chesterton
Clayton
DOVER
DEL.
BAY
Centerville
ANNAPOLIS
Queenstown
Queen Anne
Harrington
Easton
Cambridge
Oxford
Seaford
Georgetown
TAYLORS I.
Salisbury
Woodstock
Rectortown
Arlington
WASHINGTON
ALEXANDRIA
Mt. Vernon
Brandy Wine
Quantico
Occoquan
Dumfries
Mechanicsville
Ripes Creek
Warrenton
Washington
Sperryville
Manassas
Culpeper
Stanardsville
Woodville
Calverton
Bealeton
Remington
Brandy Sta.
Stafford
Winston
Rapidan
Widewater
Brooke
Madison
Elkton
Port Republic
Harrisonburg
Bridgewater
Mt. Crawford
Meadowdale
Wilsonville
Newhouse
Verona
Sunrise
Buffalo Gap
Mountaingrove
Ferrol
Craigsville
Warm Springs
Hot Springs
Crane
Mallow
Cliftonforge
Lexington
Lowmoor
Horton
Oriskany
Glasgow
Salpetre
Buena Vista
Natural Bridge
Glen Maury
Rockbridge Springs
Fincastle
New Castle
Interior
Kimbalton
Big Stony Jc.
Salem
ROANOKE
Vinton
Lithia
Buchanan
Glenvar
Narrows
Pearisburg
Churchwood
Christiansburg
Radford
Newbern
Meadows of Dan
Rural Retreat
Wytheville
Allisonia
Patterson
Betty Baker
Grayson
Buffalo Ridge
Dell
Comers Rock
Gosan
Oldtown
Independence
Aaron
Coalcreek
Stella
Spencer
Ridgeway
Cascade
Leaksville
Boone Mill
Rocky Mt.
Callaway
Wahlsboro
Floyd
Ferrum
Prillimans
Henry
Wallers
Bassetts
Martinsville
Stockton
Preston
Aston
Chatham
Dryfork
Galveston
Elba P.O.
Franklin Jc.
Clarkton
Lennig
Houston
Sutherlin
Danville
Randolph
Clover
Scottsburg
Boston
Halifax
Yanceyville
Milton
Leasburg
Roxboro
Semora
Timberlake
Bushy Fork
Stony Fork
Yanceyville
Prospect
Tuggle
Pamplin City
Farmville
Rice
Ralnes
Hampden Sydney
Prince Edward
Keysville
Brookneal
Madisonville
Naruna
Gladys
Marys
Lynch
Evington
Rustburg
Concord
Liberty
Bedford
Otter River
Bellevue
Lynchburg
Forest
Timberville
Broadway
Grove Hill
Linville
New Market
Mt. Clifton
Quicksburg
Luray
Jackson
Compton
Marshall
Mt. Jackson
Woodstock
Lantz Mills
Edenburg
Front Royal
The Plains
Fairfax
Haymarket
Middleburg
Aldie
Upperville
Paris
Ashburn
Sterling
Gainesville
Manassas
Bristoe
Catlett
Calverton
Remington
Brandy Sta.
Culpeper
Stanardsville
Woodville
Sperryville
Washington
Warrenton
Jeffersonton
Amissville
Orlean
Flint Hill
Marshall
Delaplane
Middleburg
Aldie
Upperville
Paris
Ashburn
Sterling
Gainesville
Manassas
Bristoe
Catlett
Calverton
Bealeton
Remington
Brandy Sta.
Stafford
Winston
Rapidan
Widewater
Brooke
Madison
Elkton
Port Republic
Harrisonburg
Bridgewater
Mt. Crawford
Meadowdale
Wilsonville
Newhouse
Verona
Sunrise
Buffalo Gap
Mountaingrove
Ferrol
Craigsville
Warm Springs
Hot Springs
Crane
Mallow
Cliftonforge
Lexington
Lowmoor
Horton
Oriskany
Glasgow
Salpetre
Buena Vista
Natural Bridge
Glen Maury
Rockbridge Springs
Fincastle
New Castle
Interior
Kimbalton
Big Stony Jc.
Salem
ROANOKE
Vinton
Lithia
Buchanan
Glenvar
Narrows
Pearisburg
Churchwood
Christiansburg
Radford
Newbern
Meadows of Dan
Rural Retreat
Wytheville
Allisonia
Patterson
Betty Baker
Grayson
Buffalo Ridge
Dell
Comers Rock
Gosan
Oldtown
Independence
Aaron
Coalcreek
Stella
Spencer
Ridgeway
Cascade
Leaksville
Boone Mill
Rocky Mt.
Callaway
Wahlsboro
Floyd
Ferrum
Prillimans
Henry
Wallers
Bassetts
Martinsville
Stockton
Preston
Aston
Chatham
Dryfork
Galveston
Elba P.O.
Franklin Jc.
Clarkton
Lennig
Houston
Sutherlin
Danville
Randolph
Clover
Scottsburg
Boston
Halifax
Yanceyville
Milton
Leasburg
Roxboro
Semora
Timberlake
Bushy Fork
Stony Fork
Yanceyville
Prospect
Tuggle
Pamplin City
Farmville
Rice
Ralnes
Hampden Sydney
Prince Edward
Keysville
Brookneal
Madisonville
Naruna
Gladys
Marys
Lynch
Evington
Rustburg
Concord
Liberty
Bedford
Otter River
Bellevue
Lynchburg
Forest
Timberville
Broadway
Grove Hill
Linville
New Market
Mt. Clifton
Quicksburg
Luray
Jackson
Compton
Marshall
Mt. Jackson
Woodstock
Lantz Mills
Edenburg
Front Royal
The Plains
Fairfax
Haymarket
Middleburg
Aldie
Upperville
Paris
Ashburn
Sterling
Gainesville
Manassas
Bristoe
Catlett
Calverton
Beale

NORTH CAROLINA. "Old North State." "Tar State."

Named in honor of Charles I of England.

Historical.—Twelfth of the thirteen original States to enter the Union; National Constitution adopted November 21, 1789. Attempts to colonize made by Raleigh, 1584-7. Albemarle, first permanent settlement, founded 1653. Clarendon Colony, real foundation of State, established 1665. "Mecklenburg Declaration of Independence" adopted May 20, 1775. First State Constitution 1776. Scene of various battles of the Revolution, 1780-1, and engagements and military operations of Civil War. Seceded May 21, 1861. Readmitted July, 1868.

Area, 52,250 square miles; land, 48,580; water, 3,670; extreme length, east to west, 503 miles; extreme breadth, 187. Counties, 96.

Physical Features.—Surface mountainous (Blue Ridge) and tableland in west; hilly and undulating in center; generally level in east and southeast. Greatest altitude, Mt. Mitchell, 6,688 feet. Atlantic coast line about 300 miles. Roanoke, Cape Fear, Neuse, and Chowan rivers are navigable.

Climate of middle regions warm, equable, and healthful; mountainous, cooler and subject to greater extremes; lowlands, sub-tropical, humid, and malarial. Mean annual rainfall at Raleigh, 55.5 inches; mean temperature, 59.3 deg.; highest, 103 deg.; lowest, 8 deg. above.

Agriculture.—Cotton largely cultivated; tobacco, corn, and hemp in central sections; rice in southeast. Sweet potatoes and all kinds of fruit thrive. State second in tobacco; yield, 1896, 68,629,170 pounds. Corn, 1900, 29,790,180 bushels; wheat, 5,960,803 bushels; oats, 5,046,117 bushels; hay, 176,680 tons; potatoes, 1,063,474 bushels; cotton product, 1899-1900, 503,825 bales. Value of farm animals, June, 1900, $28,242,147. Wool clip, 1901, 930,750 pounds.

Manufactures.—In 1900 there were 177 cotton mills, employing 30,273 hands; value of product, $28,372,798. State has 3 silk factories. Ranks second in manufacture of tobacco; output of factories, 1900, 24,144,270 pounds of plug tobacco, 17,239,357 pounds of smoking tobacco, 17,370,874 cigars, 638,766,900 cigarettes. Value of brick and tile, $641,280; pottery, $83,736. Sawmills, 1893, report 452,000,000 ft. of lumber; 159,000,000 shingles, $4,558,280. Distilled spirits, 1900-01, 760,437 gallons.

Minerals.—Gold, mica, coal, copper, nickel, iron, and lead exist. Value of gold product, $28,500. Bituminous coal mined, 1900, 17,734 short tons, value $23,447. Phosphate rock, 1899, 440 long tons; granite, 1900, $257,962, sandstone, $27,216.

Population.—1790, 393,751; 1890, 1,617,947; 1900, 1,893,810. Male, 938,677; female, 955,133, native, 1,889,318; foreign, 4,492; white, 1,263,603; colored, 630,207; Africans, 624,469; Chinese, 51; Indians, 5,687.

Cities.—*Wilmington*, metropolis and chief seaport; exports naval stores, lumber, and cotton; population, 1900, 20,976 *Raleigh*, capital; has important trade in cotton and manufactures; population, 13,643. *Charlotte*, settled in 1756; flourishing center of manufactures; population, 18,091. *Asheville*, famous as a well-known health resort; population, 14,694.

Railways.—State had in 1840, 53 miles; 1850, 334; 1860, 937; 1870, 1,173; 1880, 1,486; 1890, 3,128; July, 1900, 3,808.16.

Education.—Public school enrollment, 1900, 669,530; whites, 418,560; colored, 250,970; school age, 6-21; expenditure, $931,143. Six State Normal Schools and 15 colleges, including University of North Carolina, North Carolina College, Trinity College, Biddie University, Davidson College.

Political.—State elections biennial; State, congressional, and presidential elections, Tuesday after first Monday in November. Senators, 50; Representatives, 120; term, 2 years; sessions biennial. Electoral votes, 11. Voters must be actual citizens, residents of State 1 year, of county 90 days; registration required. Convicts, idiots, and insane excluded.

Legal Holidays.—January 1 and 19, February 22, May 10 and 20, July 4, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, sealed instruments, foreclosure of mortgage, 10 years; contracts, personal actions, 3. Redemption of tax sales, purchaser can demand deed 1 year after sale; action to recover land must be brought within 3 years from date of sheriff's sale. Legal interest, 6 per cent.

SOUTH CAROLINA. South Kar-o-li'-na. "Palmetto State."

Named in honor of Charles I of England.

Historical.—One of the thirteen original States; ratified National Constitution 1788. First attempted settlement made by French Huguenots at Port Royal 1562. Earliest permanent settlement made by English in 1670; Charleston founded 1679-80. Separated from North Carolina 1700; became a royal colony 1729. First State Constitution, 1776. Scene of various battles and military operations during Revolution and Civil War. Present Constitution adopted 1896.

Area.—Total area, 30,570 square miles; land, 30,170; water, 400; average length, 189; breadth, 160. Counties, 35.

Physical Features.—Surface mountainous in the northwest; hilly and undulating in interior; level near the coast. Atlantic coast line, 200 miles. Principal harbors Charleston and Port Royal.

Climate, mild and genial; sand-hill belt dry and equable; interior healthful; rice swamps malarial; mountain region exceptionable. Mean annual rainfall, Charleston, 56.7 inches; mean annual temperature, 65.3 deg.; highest, 104 deg.; lowest, 10 deg. above.

Agriculture.—Products include cotton, rice, corn, potatoes, tobacco, fruit, and early vegetables. Sea Islands produce superior cotton. Figs and pomegranates flourish in lower counties; peaches and grapes everywhere; climate adapted to silk culture and tea. Yield of rice, 1895, 850,000 bushels. Corn, 1900, 13,129,127 bushels, value $8,402,643; wheat, 2,142,828 bushels, $2,164,256; oats, 4,023,149 bushels, $1,931,112; hay, 145,798 acres, 192,453 tons, $2,213,210; potatoes, 335,946 bushels, $335,946. Area under cotton, 1899, 2,212,020 acres, yield, 830,714 bales, value $29,377,647. Value of farm animals, 1900, $19,137,229. Wool clip, 1901, 239,097 pounds.

Manufactures rapidly increasing in importance, particularly cotton; aggregate capital of mills, 1900, $39,258,946; value of output, $29,723,919; number of mills, 83, employes, 30,200; wages, $5,066,840. Value of brick and tile manufactured in 1900, $573,438. Lumber mills, 729; combined capital, $5,187,727. Distilled spirits, 1900-01, 142,007 gallons; fermented liquor, 6,615 barrels. Rice hulling, leather tanning, and manufacture of phosphate fertilizers important pursuits.

Mines.—In the southwest are immense beds of finest porcelain clay with large deposits of glass sand. State ranks second in production and value of phosphate rock. In 1896 the output of mines was 402,423 long tons; 1900, output of mines, 329,173 tons, lowest in many years; total value $1,041,970. Value of limestone, $38,415; granite, $500,802. Coining value of gold mined, $121,000.

Population.—1790, 249,073; 1890, 1,151,149; 1900, 1,340,316; Male, 664,895; female, 675,421; native, 1,334,788; foreign, 5,528; white, 557,807; colored, 782,509, Africans, 782,321; Chinese, 67; Indians, 121.

Cities.—*Charleston*, metropolis and one of chief commercial centers of South; numerous fertilizer manufactories and rice mills; exports cotton, lumber, rice, tar, etc.; population, census of 1900, 55,807. *Columbia*, capital, founded 1790; seat of University of South Carolina, founded 1804; population, 1900, 21,108. *Greenville*, most important point in northwestern section; population, 11,860.

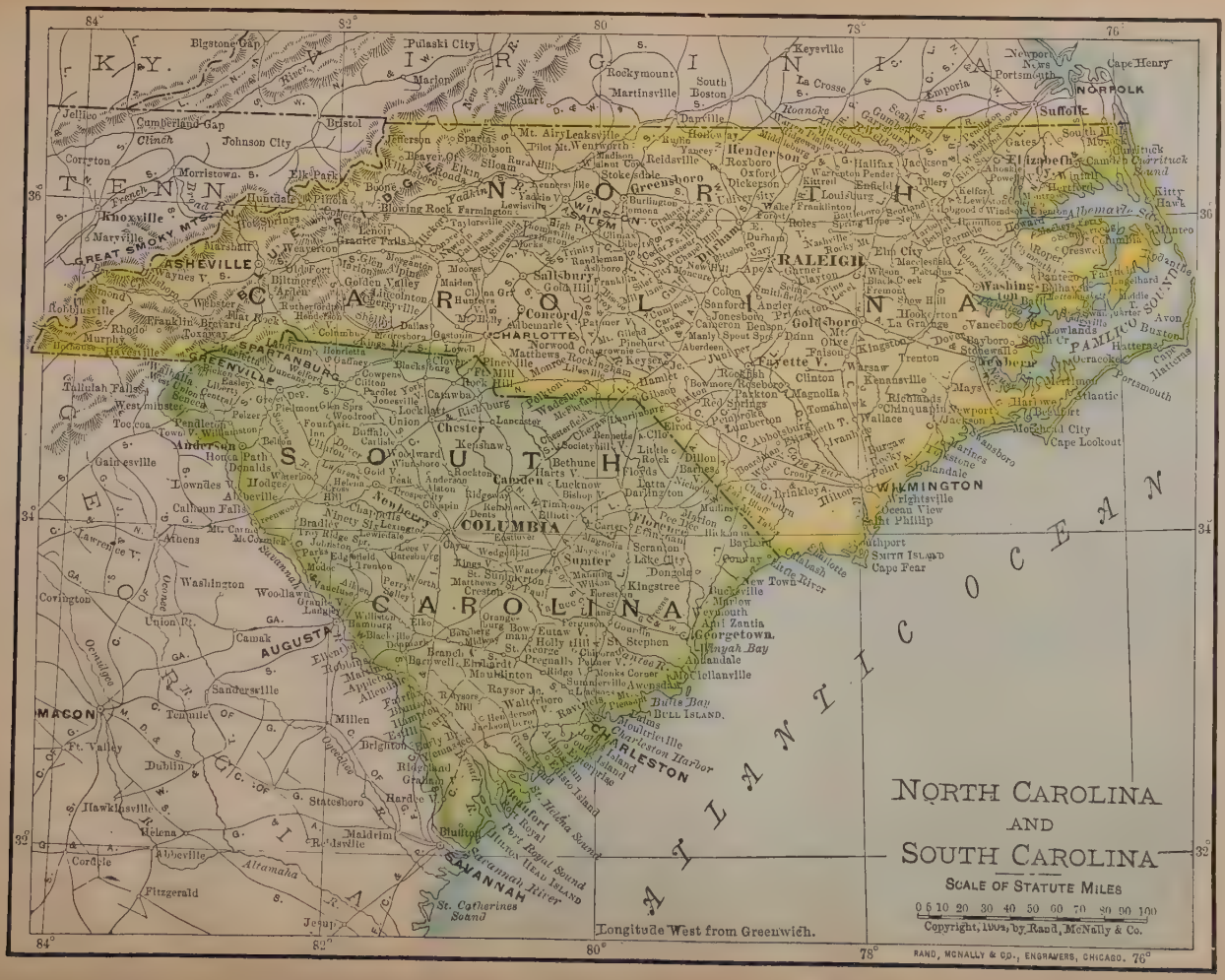
Railways.—Miles in operation, 1835 and 1840, 137; 1850, 289; 1860 973; 1870, 1,139; 1880, 1,436; 1890, 2,296; July, 900, 2,794.93.

Educational.—Present school system organized 1863. Public school enrollment, 1900, 497,760; colored, 311,900, school age, 6-21, expenditure, $894,004. South Carolina College is the State institution of higher learning, and the principal collegiate foundation in the State. Public Normal Schools at Beaufort and Rockhill.

Political.—Number of Senators, 36; Representatives, 124; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 9. Voters must be actual citizens; residents of State 2 years, of county 1 year, town and precinct 4 months; registration required.

Legal Holidays.—January 1 and 19, February 22, May 10 or Memorial day, July 4, first Monday in September, general election day, Thanksgiving, December 25 and two succeeding days.

Legal.—Statutes of limitation: Judgments and sealed instruments, 20 years; recovery real property, 10; contracts not under seal, 6; open accounts, 6; notes, 6; redemption of tax sales, 2. Legal interest rate, 7 per cent; by contract, 8.


NORTH CAROLINA
AND
SOUTH CAROLINA
SCALE OF STATUTE MILES
0 5 10 20 30 40 50 60 70 80 90 100
Copyright, 1903, by Rand, McNally & Co.
Longitude West from Greenwich.
RAND, MCNALLY & CO., ENGRAVERS, CHICAGO.
ATLANTIC OCEAN
NORTH CAROLINA
SOUTH CAROLINA
TENNESSEE
GEORGIA
RALEIGH
CHARLESTON
COLUMBIA
WILMINGTON
AUGUSTA
SAVANNAH
MACON
ASHEVILLE
NORFOLK
CHARLOTTE
GREENSBORO

GEORGIA. Jôr'-je-a. "Cracker State."

Named in honor of George II of England.

Historical.—One of the thirteen original States; last settled, but fourth in point of time to ratify the Constitution of the United States. Settled by English colonists under Oglethorpe; first permanent settlement made at Savannah February 1, 1733; became a Royal Province 1752. First State Constitution adopted February 5, 1777; others, 1785, 1865, 1868, and 1877. Adopted and ratified the National Constitution 1788. State seceded January, 1861; readmitted December, 1870. Popularly designated the Empire State of the South.

Area.—Total area, 59,475 square miles, or 37,747,200 acres; land 58,980 square miles; water, 495; extreme length north to south, 320 miles; breadth, 256; contains 137 counties.

Physical Features.—State naturally divided into Upper Georgia, traversed by Blue Ridge Mountains—highest altitude, Mt. Enota, 4,798 feet; Middle Georgia, surface hilly and undulating; and Lower Georgia—much the larger part of the State—level. Numerous navigable rivers furnish over 1,500 miles of inland navigation; Savannah and Chattahoochee most important. The many falls and rapids afford abundant water power. Atlantic coast line 128 miles, with bordering islands and sounds, 480 miles. Upper Georgia is celebrated for its fine mountain scenery and numerous beautiful cascades.

Climate, varying. Sub-tropical in the south; mild and invigorating in the middle section; exceptionally healthful in the mountainous section, where among the lower elevations are numerous excellent winter resorts. Mean annual temperature at Atlanta, 61.3 deg.; highest, 100 deg.; lowest, 2 deg. below. Savannah, winter, 51 deg.; extreme, 12 deg.; summer, 82 deg.; extreme, 105 deg. Mean annual rainfall at Atlanta, 52 inches; Savannah, 52.3 inches.

Forestry and Lumber.—Valuable forests cover a large area; resources important and varied; annually supply more than 200,000,000 feet of timber. Georgia yellow or pitch pine and live oak the most valuable of those varieties found in the country. Other varieties of oak, cedar, cypress, hickory, etc., abound. Extensive pine forests one of chief sources of natural wealth; besides lumber, over $4,000,000 of naval stores—resin and turpentine—are produced annually. Lumber industry important; value of product, 1896, $18,000,000.

Agriculture.—Nearly all productions of temperate and sub-tropical regions are cultivated successfully. Cotton is the great staple and Georgia one of the foremost cotton-producing States; ranked second in production and value in 1900. Other staple crops are corn, rice—State occupies third place among rice-producing States—and sweet potatoes, annual average yield about 5,000,000 bushels. Diversified farming becoming more general, and market-gardening now a leading and profitable pursuit. Over 120,000 acres devoted entirely to the growing of watermelons. Sugar cane is cultivated in Lower Georgia, and tobacco and peanuts are important crops in many parts of the State. Yield and value of farm products, 1900: Corn, 39,114,530 bushels, value $19,448,132; wheat, 5,011,133 bushels, $4,760,576; oats, 7,010,040 bushels, $3,434,920; hay, 112,556 acres, 190,237 tons, $2,425,522; potatoes, 5,762 acres, 391,816 bushels, $331,698; cotton, 1899, 1,345,699 bales, value $48,024,822; rice, 1901, 7,500,000 pounds, value $375,000.

Horticulture.—Georgia leads all Southern States in value of fruit products. State especially famous for its peaches; Georgia commercial peach orchards largest in the country; industry one of most prominent in State. All fruits of temperate climate grown successfully in northern sections; sub-tropical fruits figs, oranges, lemons, pineapples, and bananas—grown in south. Viticulture a profitable and rapidly growing industry—large areas are being devoted to grapes and wine-making is becoming an important pursuit.

Live Stock.—During the past decade great improvement has been made in all grades of farm animals, and dairying has become an industry of importance. Number and value of farm animals, June, 1900: Horses, 127,407, value $7,092,228; mules, 207,321, $14,454,822; sheep, 336,278, $438,363; milch cows, 276,024, $4,658,971; other cattle, 623,467, $4,169,527; swine, 1,424,298, $2,577,950; wool clip, 1901, 1,086,136 pounds.

Manufactures.—Georgia leads the Southern States in importance of manufacturing industries; interests show a notable development throughout the State, particularly cotton, woolen, and iron. In 1900, State had over $25,600,000 invested in cotton and woolen industries; mills, 98; hands, 20,117; output, $20,266,712. Among Southern cotton-manufacturing States Georgia ranks fourth. Number of cotton mills in operation, 1900, 68; knitting, 16; woolen, 14. In 1900, 43 mills engaged in manufacture of cotton-seed oil and meal; value of the output was $8,064,012. Iron and steel industries developing rapidly; brick-making and manufacture of terra cotta attracting much attention; production of commercial fertilizers important. Manufacture of lumber and naval stores a leading industry—first in turpentine and rosin, $8,110,468. Cigar factories, 1900, 73; 8,814,544 cigars; manufactured ice, 131,236 tons, $455,699; distilled spirits, 1900-01, 235,498 gallons; fermented liquor, 127,010 barrels.

Mineral resources varied and abundant though largely undeveloped. Gold, iron, and coal lead in importance. Output of gold mines, 1900, 5,644 fine ounces, value $116,700. Manganese ore, 3,447 tons, value $26,816. Entire coal product comes from the northwestern section of State; largest output in 1893, 372,740 short tons. In 1900, 315,557 short tons were mined, value $370,022. Extensive beds of fine marble exist—output of quarries ranks second only to that of Vermont in value; industry one of the most flourishing in the State. Marble noted for beauty and durability. Value of output, 1900, $631,241. Building stone and slate are abundant. Granite quarries furnished products valued at $380,434. Mineral springs, including saline, sulphurous, chalybeate, and other medicinal waters, are numerous.

Population.—Ranked thirteenth in 1790; tenth in 1830; twelfth, 1890; eleventh, 1900; total population in 1790, 82,548; 1830, 516,823; 1860, 1,057,286; 1890, 1,837,353; 1900, 2,216,331. Male, 1,103,201; female, 1,113,130; native, 2,203,928; foreign, 12,403; white, 1,181,924; colored, 1,035,037; Africans, 1,034,813; Chinese, 204; Japanese, 1; Indians, 19.

Cities.—*Atlanta*, the capital, founded about 1845. An important railroad center with a large trade in cotton, tobacco, etc. Has many large manufactories of cotton, iron, flour, etc. Population, 1890, 65,533; census of 1900, 89,872, an increase in ten years of 37.1 per cent. *Savannah*, incorporated as a city 1789; third cotton port in the country; harbor one of the finest in the South; large trade in rice, resin, turpentine, and lumber; population, 54,244. *Augusta*, at head of navigation on Savannah River; founded 1735; third city in size; important railroad and cotton manufacturing center; population, 1900, 39,441. *Macon*, commercial and manufacturing center. Seat of various educational institutions; population, 23,272. *Columbus*, large cotton market; seat of largest cotton and woolen manufactories in State; has numerous other important manufactures; population, 17,614.

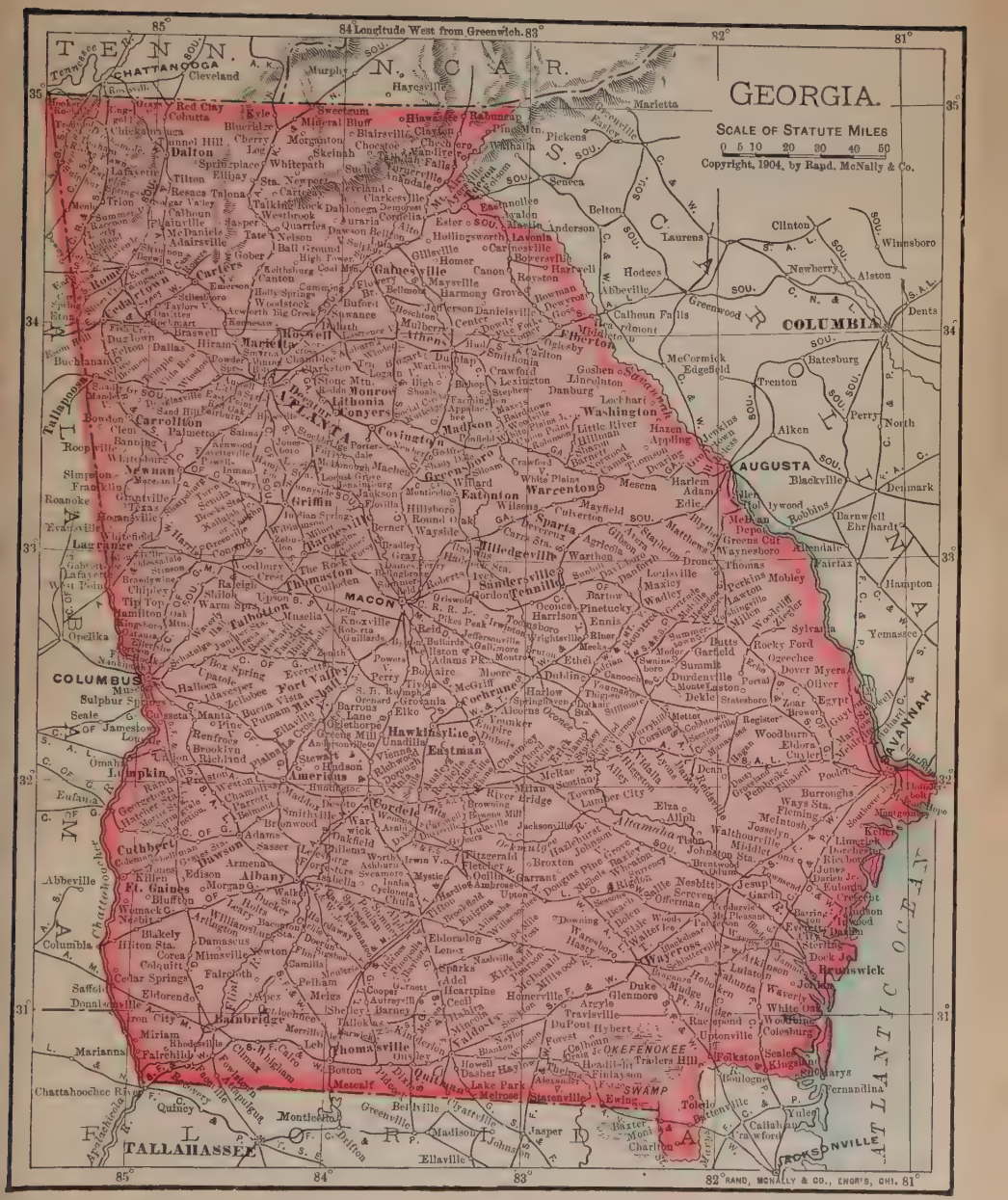
Railways.—Number of miles in 1840, 185; 1850, 643; 1855, 1,020; 1865, 1,420; 1875, 2,264; 1885, 3,116; 1891, 4,826; 1896, 5,335.36; July, 1900, 5,639.22.

Education.—Present school system went into effect 1873. Public school enrollment, 1899-00, 786,920; expenditure, $1,980,016: school age, 6-18. Among educational institutions are: Mercer University, Macon; Emory College, Oxford; Atlanta University, Atlanta; Industrial School for Negroes; State School of Technology, Atlanta; State University, Athens, organized 1785, opened 1801, has branch agricultural colleges at Hamilton, Milledgeville, Thomasville, and Dahlonega. Public Normal Schools at Athens and Milledgeville.

Political.—State elections biennial, first Wednesday in October. Congressional and presidential elections, Tuesday after first Monday in November; number of Senators, 44; Representatives, 175; term, 2 years; sessions, annual, meeting fourth Wednesday of October; limit of session, 50 days. Number of electoral votes, 13. Voters must be actual citizens, residents of State 1 year, of county 6 months; registration required in some counties. Idiots, insane, and criminals excluded.

Legal Holidays.—January 1 and 19, February 22, April 26 (Memorial Day), July 4, first Monday in September, Thanksgiving, first Friday in December, December 25.

Legal.—Statutes of limitation: Judgments, 7 years; instruments under seal, 20; open accounts, 4; promissory notes, 6; personal actions, 2; redemption of tax sales, 1 year. Legal interest rate, 7; by contract, 8.


GEORGIA.
SCALE OF STATUTE MILES
0 5 10 20 30 40 50
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Longitude West from Greenwich.
TENN.
N. C.
S. C.
ATLANTIC OCEAN
CHATTANOOGA
COLUMBUS
MACON
AUGUSTA
COLUMBIA
SAVANNAH
TALLAHASSEE
JACKSONVILLE
Dalton
Gainesville
Athens
Elberton
Washington
Madison
Covington
Greensboro
Eatonton
Warrenton
Sparta
Milledgeville
Sandersville
Tennille
Dublin
Thomaston
Griffin
Barnesville
Forsyth
Monroe
Lithonia
Conyers
Carrollton
Newnan
Fayetteville
Jonesboro
Marietta
Cartersville
Rome
Calhoun
Resaca
Dalton
Ringgold
Trion
Summerville
Lafayette
Chickamauga
Tunnel Hill
Red Clay
Cohutta
Chatsworth
Ellijay
Jasper
Canton
Woodstock
Acworth
Kennesaw
Marietta
Roswell
Alpharetta
Cumming
Buford
Lawrenceville
Duluth
Norcross
Stone Mtn.
Decatur
Atlanta
Smyrna
Austell
Powder Springs
Hiram
Dallas
Buchanan
Villa Rica
Carrollton
Bowdon
Roopville
Whitesburg
Sharpsburg
Newnan
Moreland
Franklin
Roanoke
Grantville
Senoia
Hogansville
Manchester
Greenville
Warm Springs
Pine Mtn.
Chipley
Pine Top
Hamilton
Ellerslie
Talbotton
Thomaston
Zebulon
Barnesville
Milner
Concord
Williamson
Sunny Side
Gaylesville
Lafayette
West Point
Lagrange
Opelika
Auburn
Loachapoka
Chehaw
Salem
Shiloh
Raleigh
Fort Valley
Perry
Byron
Hawkinsville
Eastman
Abbeville
Cordele
Ashburn
Sycamore
Tifton
Ty Ty
Omega
Sparks
Adel
Nashville
Lenox
Ocilla
Irwinville
Fitzgerald
Broxton
Douglas
Pearson
Willacoochee
Alma
Nicholls
Waycross
Folkston
Kingsland
Woodbine
Colesburg
Uptonville
Traders Hill
Okefenokee
Swamp
Statenville
Valdosta
Quitman
Thomasville
Bainbridge
Donalsonville
Iron City
Climax
Colquitt
Cairo
Whigham
Meigs
Pelham
Camilla
Arlington
Blakely
Hilton
Damascus
Newton
Albany
Ft. Gaines
Bluffton
Abbeville
Cuthbert
Lumpkin
Americus
Preston
Richland
Buena Vista
Talbotton

FLORIDA. Flor'-e-dah. "Peninsular State."

After Easter Sunday; Spanish, Paescua—Florida.

Historical.—Mainland discovered by Ponce de Leon, Easter Sunday, 1513. Explored by De Narvacz 1528; by De Soto 1539. Settled by Spaniards at St. Augustine in 1565; Pensacola founded by French 1696. Florida ceded to Great Britain 1763; retroceded to Spain 1783; ceded to United States 1819. Territory organized 1822; admitted as a State, March 3, 1845; fourteenth State admitted; seceded January 10, 1861; new constitution 1865; readmitted 1868.

Area.—Total area, 58,680 square miles, or 34,713,600 acres; land, 54,240 square miles; water, 4,440; extreme length, 700 miles; length of peninsula, 275 miles; average breadth, 90 miles. Contains 45 counties. Unappropriated public lands, 1,438,749 acres, 157,662 acres unsurveyed; lands reserved, 19,259.

Physical Features.—State consists largely of a peninsula stretching north to south, between the Atlantic Ocean and Gulf of Mexico. Surface generally level, elevation nowhere exceeds 300 feet above sea level. Lands classified as high and low hummock, swamp, and savanna, and covered with pine forests. Coast line, 1,200 miles; numerous inlets and bays and good harbors. Most important rivers, Apalachicola, Suwannee, St. John, and St. Mary's.

Forests.—There are extensive forests of long-leaved pine, live-oak, red cedar, cypress, and hickory. In the extreme south many varieties of trees are found which grow nowhere else in the United States. Extent and value of exports, 1897: Lumber, 493,015,475 feet, value $5,47 ,135; timber, 157,247,513 feet, $1,837,816; shingles, 32,312,050, $953,403; cross-ties, 1,445,955, $433,776; rosin, 53,786 barrels, $109,468; turpentine, 572,290 gallons, $175,902.

Climate in general, mild and equable. Continuous summer heat of Southern and Southwestern Florida tempered by constant sea breezes. Uniform winter climate of dry pine regions especially beneficial to invalids. State has a high repute as a winter health resort. Mean annual rainfall at Jacksonville, 54.0 inches; mean annual temperature, 69.7 deg.; highest temperature, 104 deg.; lowest, 14 deg. above.

Agriculture.—Florida is essentially an agricultural State; corn and rice are the chief cereals; other important crops are cotton, sweet potatoes, peanuts, and tobacco. Area under cultivation, 1900 estimated at 1,058,897 acres; estimated value of all farm products, $18,175,227. Yield and value of principal products: Corn, 4,654,774 bushels, value $2,438,862; value of upland cotton, $780,984; sea island, $1,538,705. Florida producing a large percentage of all sea-island cotton grown; sweet potatoes, 2,268,788 bushels, $885,649; peanuts, 1,219,223 bushels, $932,418; tobacco, 969,384 pounds, $247,901. Growing of vegetables and garden products for Northern markets a leading and profitable pursuit. Value of products, 1897-8, $1,778,318. Tomatoes the chief crop; production, 1899, 195,234 crates, $219,326; beans second in importance; production, 172,486 crates, $149,175. Soil and climate peculiarly adapted to the culture of cassava for the manufacture of starch, glucose, and tapioca, and that of sisal hemp for making rope, cordage, and bagging.

Horticulture.—Florida has a large area adapted to the growth of fruits. Of semi-tropical fruits grown, the orange is the most important. Pineapple culture in Indian River and Lake Worth districts has assumed large proportions. In 1899, State had 300,784 bearing and 2,499,004 non-bearing orange trees; product, 334,466 boxes, value $690,962; lemons, 12,412 bearing, 36,775 non-bearing trees; boxes, 1,006, value $1,275; lime trees, 2,737; grape-fruit, 68,027 trees; yield 9,402 barrels, value $51,037; pineapples, 187,800 crates, value $392,284; strawberries, 709 acres, yield 554,608 quarts, value $64,066; number pear trees, 64,779, yield 30,107 barrels, value $32,179; peach trees, 109,099, yield 56,070 bushels, value $57,109. Other products are bananas, guavas, cocoanuts, and pecans.

Live Stock, Etc.—Special attention is being given to improvement of live stock. Large, well-watered tracts of grazing land and a superior climate render stock-raising one of the most promising pursuits of the future. Number and value of farm animals, 1900: Horses, 42,811, value $2,290,139; mules, 13,664, $1,074,914; stock cattle, 672,431, $5,295,500; sheep, 124,520, $239,261; goats, 21,054, $43,705; hogs, 464,277, $702,827; milch cows, 78,830, $1,048,849; wool clip, 1901, 410,616 pounds, $76,210. Value of poultry, 1897-8, $602,493. Eggs sold and used, 2,233,631 dozen, value $320,235. Total value of dairy products, $768,899. Milk, 2,439,568 gallons, $641,622; butter, 567,608 pounds, $126,349; cheese, 9,245 pounds, $928.

Fisheries of the State an important and increasing source of wealth. Coast fisheries have a capital of about $1,500,000; number of fishermen 6,200; vessels, 215; boats, 2,400; total catch, 1900, 177,950 barrels, value $983,000. Catch includes red snapper, mullet, trout, shrimp, green turtle, and oysters. Florida the only State having sponge fisheries. Key West sponge fishery employs 136 vessels, 1,827 men, and $518,932 capital. Florida sponge yield, 364,990 pounds, value $567,685.

Manufactures are chiefly pine lumber, naval stores, cigars, palmetto hats, and braid. Value of tobacco, cigars, and cigarettes manufactured, 1900, $10,891,286. In 1900, 400 single account cigar factories produced 180,764,083 cigars, and 712,320 cigarettes; output of 11 other factories, 17,975 pounds of smoking tobacco. Annual production of cigars manufactured at Key West valued at about $5,000,000. Output of all the manufacturing industries for 1900 amounted to $38,189,894; output of saw, planing, and shingle mills, $777,782; lumber products, $10,848,403; ice factories, $427,726; fertilizer works, $555,394; tar and turpentine, $7,794,101; publishing, etc., $603,410. Total value of brick and tile, $140,604; common brick, $136,779; pottery, with Georgia, $24,383.

Minerals.—Phosphate rock, discovered 1888, is the most important of the mineral resources. Florida has been the chief source of the world's supply. Output, 1900, 706,243 tons, value $2,983,312. Shipments, 1899-00, 348,556 tons. Gold exists in the north. Limestone or coquina stone is quarried chiefly for making lime; numerous deposits of fuller's earth are found throughout the State.

Population.—Total population, 1880, 269,493; 1890, 391,422; 1900, 528,542. Male, 275,246; female, 253,296; native, 504,710; foreign, 23,832; white, 297,333; colored, 231,209; Africans, 230,730; Chinese, 120; Japanese, 1; Indians, 358.

Cities.—*Jacksonville*, largest city; prominent railway, steamboat, and commercial center; head of ocean navigation; favorite winter resort; population, 1900, 28,429. *Key West*, southernmost town of United States; important naval station; has extensive cigar manufactories; population, 17,114. *Pensacola*, seaport, and one of largest lumber markets in country; other exports—fish, fruit, and vegetables. United States navy yard near by; population, 17,747. *Tampa* has important import and export trade; large cigar factories; population, 15,839. *St. Augustine*, oldest city in United States; notable winter resort; population, 4,272. *Tallahassee*, capital; population, 2,981.

Railways.—Number of miles of road in 1850-55, 21; 1860, 402; 1875, 484; 1885, 1,054; 1891, 2,573; 1896, 3,125.65; July, 1900, 3,272.06 miles.

Education.—In 1899-00, the total enrollment in the public schools of the State was 175,610; of these pupils, 97,970 were white, and 77,640 were colored. The total expenditure for schools was $765,777. School age 6-21. Public high schools, 33; private secondary schools, 9. Among educational institutions are: John B. Stetson University, now affiliated with the University of Chicago; Rollin's College, Winter Park; Florida Agricultural and Mechanical College, Lake City; West Florida Seminary, Tallahassee; East Florida Seminary, Gainesville; State Normal School for colored students, Tallahassee; State Normal School for white pupils, De Funiak Springs.

Political.—State, congressional, and presidential elections, Tuesday after first Monday in November; number of Senators, 32; Representatives, 68; sessions, biennial, in odd-numbered years, meets Tuesday after first Monday in April; limit of session, 60 days; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 4. Voters must be citizens or declared intention, residents of State 1 year, of county 6 months; registration required. Idiots, insane, criminals, bettors on elections, and duelists excluded.

Legal Holidays.—January 1 and 19, February 7 and 22, April 26, June 3, July 4, first Monday in September, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, written contracts under seal, 20 years; written contracts not under seal, 5; verbal contracts, 3; open accounts, 4; notes, 5; redemption of tax sales, 2 years. Legal interest rate, 8 per cent; by contract, 10.

FLORIDA.
SCALE OF STATUTE MILES.
0 10 20 40 60 80 100
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Longitude West from Greenwich.
GULF OF MEXICO
ATLANTIC OCEAN
GEORGIA
ALA.
FLORIDA
Mobile
Mobile Bay
Pensacola
Milton
Vernon
Marianna
Quincy
TALLAHASSEE
St. Marks
Andrews Bay
Coe Point
Pt. St. Joseph
Cape San Blas
Brick Yard
APALACHEE BAY
Carrabelle
Apalachicola
Deadmans Bay
Suwannee River
Cedar Keys
Dunnellon
Homosassa
Hernando
Brooksville
Tarpon Springs
Tampa
St. Petersburg
Tampa Bay
Port Tampa
Fort Green
Parish
Braidentown
Sarasota
Pine Level
Charlotte Harbor
Punta Gorda
Alva
Myers
SANIBEL ISLANDS
Cape Romano
TEN THOUSAND ISLANDS
BAY OF FLORIDA
KEY WEST
MARQUESAS KEYS
FLORIDA KEYS
Barnes Sound
Big Cypress Swamp
THE EVERGLADES
Okefenokee Swamp
Thomasville
Climax
Monticello
Quitman
Valdosta
Jasper
Callahan
Fernandina
CUMBERLAND I.
Jacksonville
Mayport
Pablo Beach
Cove Springs
St. Augustine
E. Palatka
Palatka
Hawthorne
Citra
Silver Springs
Ocala
Gainesville
Lake City
Live Oak
Starke
Baldwin
Middleburg
Hampton
Waldo
Melrose
Micanopy
Bronson
Daytona
New Smyrna
Enterprise
Sanford
Orlando
Winter Park
Kissimmee
Lakeland
Plant City
Bartow
Lake Kissimmee
Avon Park
Zolfo Springs
Fort Bassinger
Liverpool
Lake Okeechobee
Eden
Sebastian
Indian River Inlet
Jupiter
Juno
W. Palm Beach
Miami
Ocala
Wildwood
Leesburg
Eustis
Tavares
Mt. Dora
Orange Bend
Esmarelda
Aston
Oviedo
Winter Park
Rockledge
Narcoossee
Eau Gallie
Micco
Fort Pierce
St. Lucie
Pensacola
Millview
Oak Grove
Cora
Crestview
Sterling
De Funiak Springs
Neal's Landing
Muscogee
Marianna
Vernon
Milton
Andrews Bay
Coe Point
Brick Yard
Pt. St. Joseph
Cape San Blas
Apalachicola
Carrabelle
Deadmans Bay
Suwannee River
Cedar Keys
Dunnellon
Homosassa
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Gainesville
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Live Oak
Starke
Baldwin
Middleburg
Hampton
Waldo
Melrose
Micanopy
Bronson
Daytona
New Smyrna
Enterprise
Sanford
Orlando
Winter Park
Kissimmee
Lakeland
Plant City
Bartow
Lake Kissimmee
Avon Park
Zolfo Springs
Fort Bassinger
Liverpool
Lake Okeechobee
Eden
Sebastian
Indian River Inlet
Jupiter
Juno
W. Palm Beach
Miami
Ocala
Wildwood
Leesburg
Eustis
Tavares
Mt. Dora
Orange Bend
Esmarelda
Aston
Oviedo
Winter Park
Rockledge
Narcoossee
Eau Gallie
Micco
Fort Pierce
St. Lucie

ALABAMA. Al-a-băh'-mah. "Cotton State."

Indian—"Here we rest."

Historical.—Visited by Europeans under De Soto, 1547. First settled by French near Mobile Bay, 1702; Mobile founded, 1711. Part of territory ceded to England, 1763; to the United States, 1783; remaining territory ceded by Spain to United States, 1819. Originally a part of Georgia, became part of Mississippi Territory 1804; Territory of Alabama organized, 1817; admitted to the Union, December 14, 1819; the ninth State admitted. Seceded, 1861; re-admitted, July, 1868.

Area.—Total area, 52,250 square miles; water, 710; land, 51,540; extreme length, 336 miles; breadth, 200 miles. Counties, 66. Reserved land, 53,880 acres.

Physical Features.—State consists of four distinct divisions, widely divergent in climate, surface, soil, and productions: The Cereal Belt—Valley of the Tennessee; Mineral and Cotton—Black—Belts; and the Forest or "Piny Woods" Region. Allegheny and Cumberland mountains traverse State in northeast. Highest point in State, Mt. Chehawhaw, 2,407 feet. Alabama and Tombigbee rivers traverse the State from north to south; Tennessee River, in north, from east to west. State excels in number of valuable waterways. Over 2 000 miles of inland steam navigation. Extent of seacoast, 53 miles.

Forests.—The magnificent forests form one of the most valuable sources of wealth. Area under timber, 20,930,693 acres. Pine, oak, walnut, poplar, gum, hickory, cypress, and red cedar are abundant. North of the Gulf are vast areas covered with extensive forests of long-leaf pine. Large quantities of lumber and turpentine are produced. Lumber exports, foreign and coastwise, 1897, 71,228,574 feet.

Climate comparatively equable. Summer heat in northern sections tempered by the mountains. Sub-tropical region toward south subject to perpetual sea breezes. Hill region especially healthful and agreeable, abounding in numerous mineral springs. Unusual dryness of air and soil in Pine district renders it peculiarly attractive as a winter health resort. Average temperature Northern Section: Yearly, 60 deg.; summer, 75 deg.; winter, 42 deg. Central Section: Yearly, 63 deg.; summer, 81 deg.; winter, 49 deg. Southern Section: Yearly, 63 deg.; summer, 80 deg.; winter, 52 deg. Average rainfall: State, 52.5 inches; Northern Section, 50.5; Central Section, 50.3; Southern, 56.6.

Agriculture.—In spite of its great mineral wealth Alabama is essentially an agricultural State. The development of the industry commands especial interest from the State, ten agricultural stations and schools having been established to provide instruction in scientific agriculture. Cotton the great staple, Alabama ranking fourth in production. Indian corn is second in importance. Wheat, oats, barley, and rye produced in the northern sections. Tobacco culture important in the north; marsh and upland rice and sugar cane grown in the south. Sweet potatoes cultivated throughout the State; annual yield about 5,000,000 bushels, Alabama occupying fourth place as a producer. Yield and value of crops, 1900: Corn, 29,355,942 bushels, $17,026,446; wheat, 916,351 bushels, $815,552; oats, 4,380,754 bushels, $1,927,532; potatoes, 417,933 bushels, $342,705; hay, 94,061 tons, $992,344. Area under cotton, 1899, 2,883,049 acres; yield, 1,005,313 commercial bales; value of crop, $35,852,176; tobacco, 311,950 pounds, valued at $55,581. The production of rice in 1899 was 926,946 pounds; sugar, 13,765 pounds; molasses, 2,672,438 gallons.

Horticulture.—Large areas of the State especially adapted to the culture of tree and small fruits and the vine. All the hardier fruits—pears, apples, peaches, plums, grapes, etc.—are grown to perfection in the northern section. Annual peach crop exceeds 2,000,000 bushels. Soil and climate of the hill regions singularly like those of the European sections famous for their wines. Large and increasing areas are devoted to culture of the vine. Manufacture of wine is a profitable and growing pursuit. Oranges, figs, and other tropical fruits produced along the Gulf coast.

Live Stock.—Of late years the improvement of breeds and enlargement of herds has shown steady and notable increase. Numerous fine herds of Jersey cows are established. Number and value of farm animals, June, 1900: Horses, 152,643, value $7,906,121; mules, 193,889, $13,239,368; milch cows, 279,263, $5,512,940; other cattle, 520,411, $4,280,616; sheep, 317,053, $448,299; swine, 1,423,329, $2,887,230. Wool clip, 1901, 912,496 pounds.

Manufactures.—Iron manufactures lead in importance; State ranks fourth in production of pig iron. In 1901, 45 furnaces produced 1,225,212 tons of pig iron; Birmingham district, 1897, had fourteen furnaces with a daily output of 2,700 tons. The manufacture of basic steel from phosphoric iron is likewise an important industry of Birmingham. In 1900 Alabama ranked third in production of coke: production, 2,110,837 short tons, value $5,629,423. Textile manufactures are being extended rapidly. In 1890 State had 13 establishments for manufacture of cotton goods. In 1900, cotton mills 31; bales consumed, 134,371, spindles, 411,328. Alabama ranking fourth in importance among Southern States. Number of tobacco and cigar factories, 75; total amount manufactured tobacco, 199,529 pounds, mostly snuff; number of cigars, 7,370,589 Amount of distilled spirits, 1900-01, 160,409 gallons; fermented liquor, 63,938 barrels.

Minerals.—The Mineral Belt is the largest of the four sections into which State is divided. Mineral deposits practically inexhaustible and but slightly developed. Almost all principal minerals exist. Coal, iron, and stones most important of those worked. Proximity of coal, iron, and limestone renders Alabama one of the cheapest fields in the world for manufacture of iron. Coal area, 8,650 square miles; Warrior field, 7,800 square miles; Coosa, 415 square miles; Cahaba, 435. State ranks fifth in production. Output of mines, 1900, 8,394,275 tons; value $9,793,585. Output, 1898, 6,504,960 tons. Coal largely manufactured into coke for use in production of pig iron. In 1900 State ranked third in production of iron ore. Ore mined, 2,759,247 tons: Red hematite, 1,989,689 tons; brown, 769,558 tons. Gold mined, 92 ounces, value $1,900. Valuable deposits of lead ore exist. Other minerals are copper, ochre, white and colored marble.

Population.—Ranked nineteenth in 1820; thirteenth, 1860; and eighteenth in 1900. Total population, 1820, 127,901; 1860, 964,201; 1890, 1,513,017; 1900, 1,828,697. Male, 916,764, female, 911,933; native, 1,814,105; foreign, 14,592; white, 1,001,152; colored, 827,545; Africans, 827,307; Chinese, 58; Japanese, 3; Indians, 177.

Cities.—*Mobile*, the metropolis, founded by the French, 1711; only seaport in the State; one of the chief ports in the country for export of cotton; has a large trade in timber, naval stores, and coal. Population, census of 1900, 38,469. *Birmingham*, a prominent railway center and one of the foremost iron manufacturing cities in the country; population, 38,415. *Montgomery*, the capital, on the Alabama River, has a flourishing trade, especially in cotton; population, 30,346. *Anniston*, a manufacturing town in an important iron region; population, 9,695.

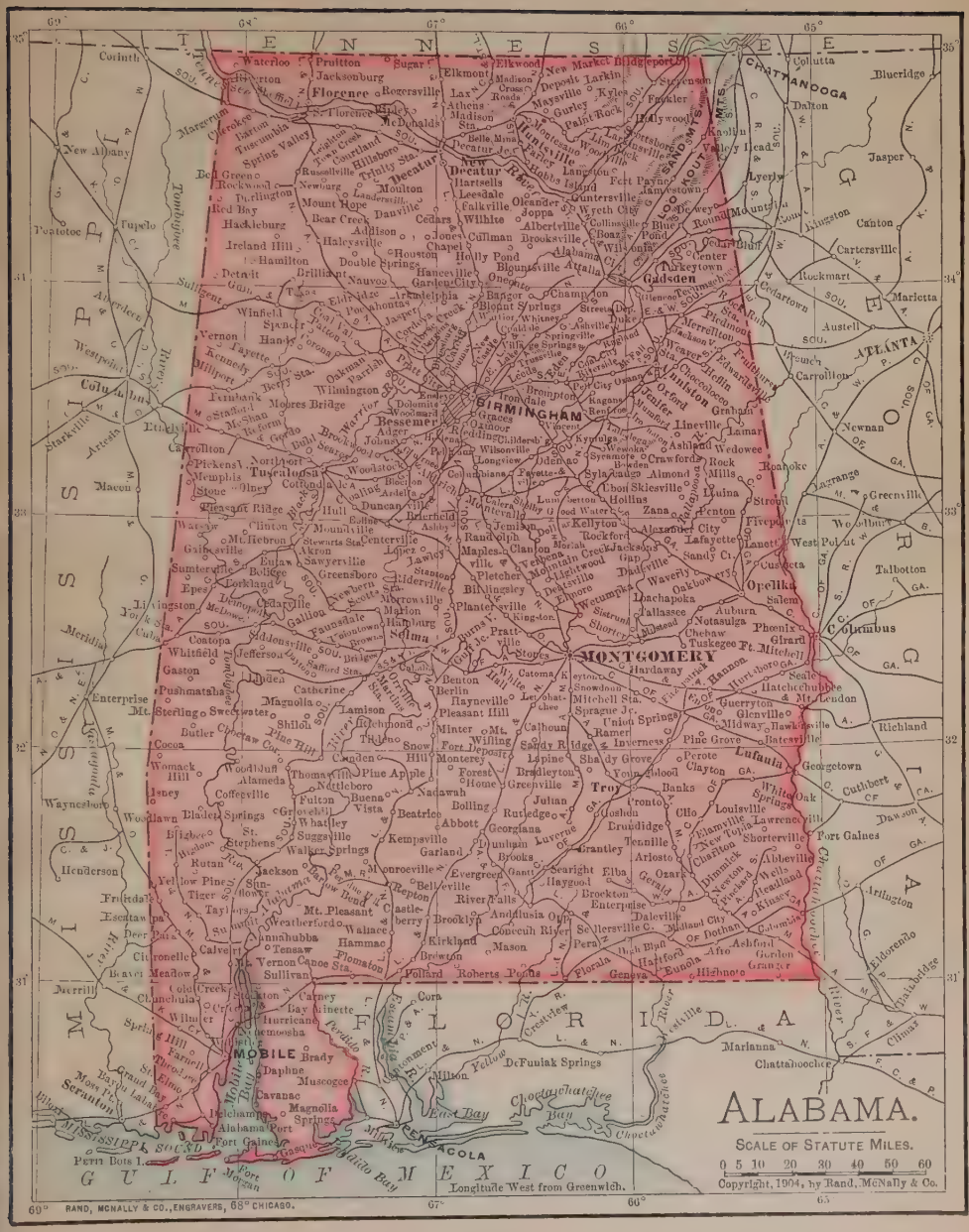
Railways.—Number of miles in operation, 1850, 183; 1860, 743; 1870, 1,157; 1880, 1,843; 1890, 3,422.20; 1894, 3,633.56; 1895, 3,664.45; 1896, 3,680.48. The total mileage, July, 1900, was 4,219.29.

Education.—Public school enrollment 1899-00, 652,930, white, 351,630; colored, 301,300; school age, 7-21; public high schools, 62; private secondary schools, 55. Educational institutions: University of Alabama, Tuscaloosa, has an endowment of $300,000. Agricultural and Mechanical College, Normal; Industrial School, Montevallo; Normal Schools, Florence, Jacksonville, Livingston, and Troy (white); Tuskegee Normal and Industrial College, and Huntsville and Montgomery Normal Schools for colored students.

Political.—State elections, biennial, first Monday in August. Congressional and presidential elections, Tuesday after first Monday in November; number of Senators, 33; Representatives, 100; term of Senators, 4 years; Representatives, 2 years; sessions, biennial, in even-numbered years, meeting first Tuesday after second Monday in November; limit of session, 50 days. Number electoral votes, 11. Voters must be actual citizens or declared intention, resident of State 1 year, of county 3 months, town and precinct 30 days; registration required; convicts and idiots excluded. Ballot reform.

Legal Holidays.—January 1 and 19, Mardi Gras, February 22, April 26, Good Friday, June 3, July 4, first Monday in September, Thanksgiving, and December 25.

Legal.—Statutes of limitation: Judgments, 20 years; sealed instruments, real actions, 10; open accounts, 3; notes, stated accounts, 6; redemption of tax sales, 2 years. Legal interest rate, 8 per cent.


ALABAMA.
SCALE OF STATUTE MILES.
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Longitude West from Greenwich.
RAND, McNALLY & CO., ENGRAVERS, 68 CHICAGO.
TENNESSEE
MISSISSIPPI
GEORGIA
FLORIDA
GULF OF MEXICO
BIRMINGHAM
MONTGOMERY
MOBILE
PENSACOLA
CHATTANOOGA
ATLANTA
Florence
Decatur
Huntsville
Gadsden
Talladega
Anniston
Oxford
Jacksonville
Selma
Opelika
Eufaula
Troy
Dothan
Evergreen
Andalusia
Brewton
Flomaton
Atmore
Bay Minette
Daphne
Fairhope
Foley
Gulf Shores
Orange Beach
Perdido Bay
Mobile Bay
Mississippi Sound
Dauphin Island
Petit Bois I.
Pascagoula
Scranton
Ocean Springs
Biloxi
Gulfport
Pass Christian
Bay St. Louis
Waynesboro
Meridian
Tuscaloosa
Demopolis
Livingston
Aberdeen
Tupelo
Corinth
Iuka
Florence
Sheffield
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Muscle Shoals
Russellville
Moulton
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La Fayette
Valley Head
Collinsville
Fort Payne
Albertville
Guntersville
Scottsboro
Stevenson
Bridgeport
Paint Rock
Gurley
Madison
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Elkmont
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New Market
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West Point
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Tuskegee
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Cartersville
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Blue Ridge
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Decatur
Stone Mountain
Lithonia
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Covington
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Swainsboro
Wrightsville
Dublin
Cochran

MISSISSIPPI. Mis'-sis-sip-pi. "Bayou State."

Indian Origin—"Great Long River."

Historical.—First visited by De Soto, 1540; by Joliet and Marquette, 1673; La Salle, 1682. First settlement made at Biloxi by Iberville, 1699. Natchez founded 1716. Territory ceded to English by France, 1763; part ceded to United States, 1783; remainder acquired, 1811. Mississippi Territory organized, 1798. Admitted as a State, December 10, 1817; seventh State to enter the Union; seceded January, 1861; readmitted, 1870. Various events of Civil War occurred within its borders, notably the siege of Vicksburg. Present Constitution adopted 1890; limits right of suffrage to those who can read the Constitution.

Area.—Total area, 46,810 square miles, or 29,685,000 acres; land, 46,340 square miles; water, 470; extreme length north and south, 330 miles; greatest breadth, 188 miles. Counties, 76.

Physical Features.—Surface hilly in part, but generally level, State consisting largely of an undulating plateau sloping gently to the south and west. The "Yazoo Delta"—the low alluvial region lying along and between the Yazoo and Mississippi rivers—contains 7,000 square miles. Coast line on Mississippi Sound, 85 miles; water frontage on Mississippi River, 500 miles. Mississippi drains a large portion of State—with Yazoo, Tallahatchie, Yalobusha, and others, furnishes a large amount of navigable waterway.

Forests.—Nearly one-half the State is still under forest, Yazoo Delta alone contains over 4,000,000 acres of land, covered by a dense growth of timber. Standing timber estimated at 75,000,000,000 feet. Oak, cypress, pine, and black walnut, with numerous other varieties of wood, furnish unlimited supplies of raw materials for manufactures. The lumber interests are growing rapidly, the value of these exports for May, 1896, being $270,000.

Climate nearly sub-tropical. Summers long—heat tempered by sea breezes in south and variable winds prevailing throughout the State. Winters colder than those in same latitude on Atlantic Coast, but only in exceptional seasons does frost occur in south. Mean annual rainfall at Vicksburg, 55.7 inches; mean annual temperature, 65.9 deg.; highest, 101 deg.; lowest, 3 deg. above.

Agriculture the chief industry; engages over 80 per cent entire working population. Mississippi in 1900 ranked third in production and value of cotton. Other staple productions are corn and sweet potatoes, corn ranking second in importance to cotton. Rice and sugar cane are grown in the south. Hay, oats, flax, tobacco, and wool are also largely produced. Truck-farming is an important and growing industry. Strawberries, melons, and vegetables are produced for Northern markets. The cultivation of jute promises to be a successful and profitable pursuit. Land under cultivation, 1896, 6,849,390 acres; average size of farms, 122 acres. Productions and values, 1900: Corn, 25,231,998 bushels, value $14,634,559; oats, 2,390,052 bushels, $1,099,424; hay, 57,098 acres, yield 99,922 tons, $994,224; potatoes, 5,259 acres, 347,094 bushels, $288,088. Acres under cotton, 1899, 2,784,286, product, 1,203,739 bales; total value $44,175,897.

Horticulture.—Orchard products of Western Mississippi long famous for superior qualities, especially peaches and pears; industry has attained new prominence, large areas being devoted to extension of orchards. Plums, pears, apricots, grapes, nectarines, and peaches, with many varieties of apples, may be grown successfully throughout the State. In the Gulf region oranges, figs, and olives reach perfection. Large quantities of figs are canned; culture of figs and pomegranates is a growing source of wealth. Pecan culture also becoming a profitable industry.

Live Stock.—Excellent pasturage abounds throughout the State. During the past decade live stock and dairying have received constantly increasing attention. Native cattle have been greatly improved, and numerous herds of full-blooded Jersey and other fine cattle are to be found. Dairy-farming has become a profitable industry; native milk and butter now constitute important articles of trade. Number and value of farm animals, June, 1900: Horses, 229,311, value $10,862,851; mules, 214,259, $14,128,807; sheep, 312,632, $534,935; milch cows, 299,318, $6,403,246; other cattle, 574,038, $5,662,675; swine, 1,290,498, $2,963,573. Wool clip, 1901, 1,148,958 pounds.

Fisheries.—Commercial fishing conducted in interior waters and along the Gulf Coast. Salt and fresh water fish abundant; among the more important are trout, red snapper, blue fish, pompano, Spanish mackerel, and shad. Oysters, shrimp, and soft and hard shell crabs are abundant and are an important source of wealth. Diamond-back terrapin are found in the marshes. The canning of oysters and shrimp is a growing and profitable pursuit. Yearly output, about 5,000,000 cans of oysters and 500,000 cans of shrimp. Gulf fish of superior quality; fisheries constitute an important industry, employing about 1,800 persons.

Manufactures as a whole are as yet of minor importance. Production of cotton goods, cotton-seed oil and meal, and sawing and planing of lumber the chief industrial pursuits. Production of naval stores, brick and tile, and agricultural implement manufactories, and flouring mills offer employment to increasing numbers. Value lumber and timber products, 1900, $15,656,110. Number of cotton mills, 6; number spindles, 75,122; aggregate capital, $2,210,000; total number employes, 1,200. Value of all clay productions, 1900, $546,741. Value of common brick, $510,600; pressed, $12,775; vitrified, $1,750; drain tile, $1,035; pottery, $20,201. Distilled spirits, Mississippi and Louisiana, 1900-01, 848,549 gallons; fermented liquor, 220,604 barrels.

Population.—Ranked twentieth in 1800; twenty-second in 1830, fourteenth, 1860; twenty-first, 1890; twentieth, 1900. Total population in 1800, 8,850; 1830, 136,621, 1860, 791,305; 1890, 1,289,600 population census of 1900, 1,551,270. Male, 781,451; female, 769,819; native, 1,543,289; foreign, 7,981; white, 641,200; colored, 910,070; Africans, 907,630; Chinese, 237; Indians, 2,203.

Cities.—*Vicksburg*, metropolis of the State and chief city on Mississippi River between Memphis and New Orleans; has large export trade in cotton and important and growing manufactures; population, 1900, 14,834. *Jackson*, the capital, on the Pearl River, 183 miles north of New Orleans; important railway and manufacturing center, with a large trade in cotton; population, 7,816. *Natchez*, on the Mississippi River, one of the oldest towns in the State; principal industry, cotton, has large export trade; population, 12,210. *Meridian*, a leading railway center, with important manufactures; population, 14,050. *Greenville*, popularly known as the "Queen City of the Delta;" railway center and important river port in the great cotton region; has large cotton-seed oil and saw and planing mills, and ice and brick manufactories; population, 7,642.

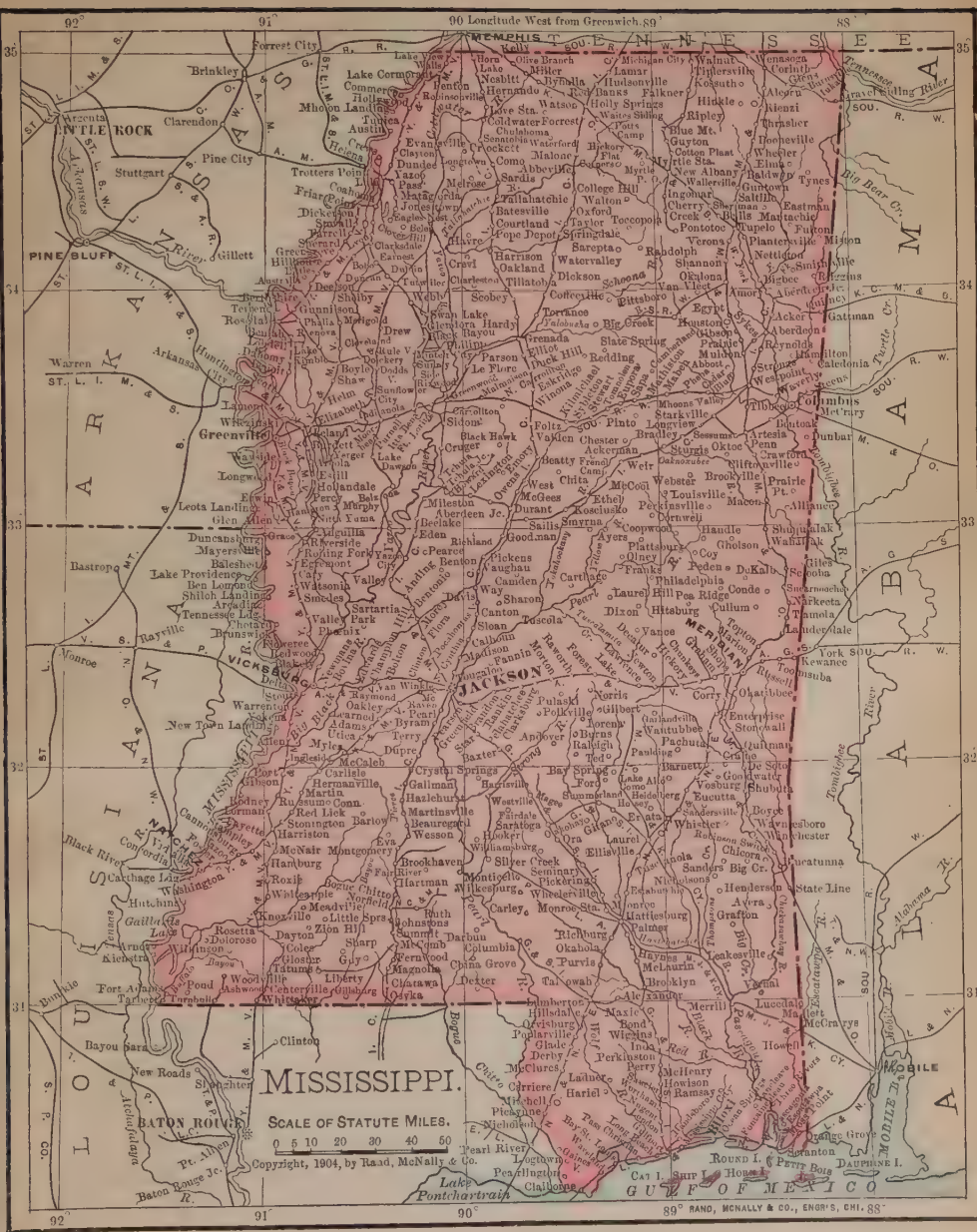
Railways.—First railroad built, 1840. Number of miles in operation, 1850, 73; 1860, 862; 1870, 990; 1880, 1,127; 1891, 2,471; July, 1900, 2,919.90 miles, averaging 18.82 miles per 10,000 inhabitants.

Education.—Public school enrollment, 1899, 538,800; private, 14,021; school age, 5-21; expenditure, $1,306,186. Public high schools, 100; private secondary schools, 43. Among educational institutions is the University of Mississippi, organized 1844, Oxford. Public Normal Schools are maintained at Holly Springs, Abbeville, Louisville, Blue Springs, Sherman, and Walnutgrove. Alcorn Educational and Mechanical College, for colored boys; Agricultural and Mechanical College, Starkville; Tougaloo University, with normal, industrial, model, intermediate, and primary departments, instructing colored students mostly, Mississippi College, Clinton; Rust University, Holly Springs.

Political.—General elections, quadrennial, Tuesday after first Monday in November; number of Senators, 45; Representatives, 178; sessions biennial, in even-numbered years; meets Tuesday after first Monday in January; limit of session, 30 days; term of Senators and Representatives, 4 years. Number of electoral votes, 9. Voters must be actual citizens, residents of State 2 years; county, town, and precinct 1 year; registration required; ballot reform. Idiots, insane, criminals, Indians not taxed, and delinquent taxpayers excluded.

Legal Holidays.—January 1, July 4, Thanksgiving, and December 25.

Legal.—Statutes of limitation: Judgments, 7 years; open accounts, verbal contracts, 3; notes, 6; redemption of tax sales, 2 years. Legal interest rate, 6 per cent; by contract, 10


90 Longitude West from Greenwich
MISSISSIPPI.
SCALE OF STATUTE MILES.
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MEMPHIS
VICKSBURG
JACKSON
MERIDIAN
MOBILE
BATON ROUGE
PINE BLUFF
LITTLE ROCK
GULF OF MEXICO
Lake Pontchartrain

KENTUCKY. "Blue Grass State."

Indian origin—At the head of the river.

Historical.—Earliest explorations by John Findlay, 1767. First visited by Daniel Boone, 1769. Harrodsburg, first settlement, founded 1774; Boonesboro laid out, April, 1775; became a county of Virginia, 1776; part of United States Territory south of the Ohio, 1790. Admitted as a State, June 1, 1792: second State admitted after formation of Government. Four constitutions, 1792, 1800, 1850, and 1891.

Area.—Total area, 40,400 square miles; land, 40,000; water, 400; length, east to west, 458 miles; extreme width, 171. Counties, 119.

Physical Features.—Surface an elevated plain sloping from southeast to north and west; average elevation over 1,000 feet; greatest, 3,500. Navigable waters form 813 miles of boundary. State contains many natural curiosities; Mammoth Cave most widely known.

Climate mild and healthful. Annual average rainfall for State, 48 inches. Mean annual rainfall at Louisville, 45.8 inches; mean annual temperature, 57.1 deg.; highest, 105 deg.; lowest, 20 deg. below.

Agriculture a leading pursuit. Foremost State in tobacco and hemp. Farm products, 1900: Tobacco, 189,305,412 pounds; hay, 890,064 tons; barley, 37,523 bushels; potatoes, 2,807,490 bushels; cotton, 39,500 pounds; wheat, 12,442,846 bushels; oats, 9,309,293; corn, 69,267,224. Hemp, in 1898, 3,178,133 pounds; grass and clover seed, 54,995 bushels. Apples, peaches, grapes, and small fruits abundant.

Live Stock.—Breeding of fine cattle, horses, and mules an important industry; Kentucky famous for its trotting and running horses. Value of thoroughbreds, 1897, $717,433. Value of farm animals, 1900, $70,488,177; wool clip, 1901, 2,323,215 pounds.

Manufactures show notable advance. State first in output of fine whiskies—1897, 17,470,887 gallons; third in chewing and smoking tobacco. Jeans, agricultural implements, leather, and cement next. Value of all products, 1900, $154,605,115. Louisville products alone, 1900, nearly $80,000,000. Value of manufactured tobacco, total output, $21,922,111; flouring mill products, $14,515,161; lumber and timber products, $13,774,911.

Minerals.—Coal most important; area, 15,680 square miles—eastern field, 11,180; western, 4,500. Output, 1900, 5,328,964 tons. Fields rich in cannel coal. Output of iron ore, 1900, 52,920 tons; value of natural gas, $194,032. Gold, silver, and zinc found. Vast beds of onyx, sandstone, and limestone exist. Mineral springs numerous; many are famous health resorts.

Population, 1790, 73,677; 1890, 1,858,635; 1900, 2,147,174. Male, 1,090,227; female, 1,056,947; native, 2,096,925; foreign, 50,245; white, 1,862,309; colored, 284,865.

Cities.—*Louisville*, chief city in State and largest tobacco market in Union; population, 1900, 204,731. *Covington*, population, 42,938; *Newport*, population, 28,301; on Ohio River opposite Cincinnati. *Lexington*, chief railroad center of interior Kentucky; population, 26,369. *Frankfort*, capital; large trade in tobacco, whisky, and lumber; population, 9,487. *Bowling Green*, largest city in Southern Kentucky; large export trade in mules and fine horses; population, 8,226.

Railways.—First railway—Lexington to Frankfort—15 miles, completed 1835. Mileage, 1850, 73; 1860, 534; 1880, 1,530; 1890, 2,946; July, 1900, 3,059.99.

Education.—Enrollment in public schools, 1897, 673,520; expenditure, $2,650,190. School age, 6-20; compulsory school law, age, 7-14. Educational institutions: Georgetown College, Georgetown; Central University, Richmond; Centre College, Danville; Kentucky University, and State Agricultural and Mechanical College—its farm the home of Henry Clay, Lexington; Normal School for Colored, Frankfort.

Political.—Number of Senators, 38; Representatives, 100; term of Senators, 4 years; Representatives, 2 years. Electoral votes, 13. Voters must be actual citizens; residents of State 1 year, county and town 6 months, precinct 60 days; limited registration.

Legal Holidays.—February 22, July 4, first Monday in September, Thanksgiving, December 25, and public fast days.

Legal.—Statutes of limitation: Judgments, written contracts except negotiable instruments, 15 years; verbal contracts, negotiable instruments, 5; merchants' accounts, 2. Redemption of tax sale made by paying 15 per cent penalty on tax and additional 30 per cent interest per annum from sale. Legal interest, 6 per cent.

TENNESSEE. Tĕn-ne-see'. "Volunteer State."

Indian—signifies, "River of big bend."

Historical.—Permanent colony established at Fort Loudon, on Little Tennessee River, 1756. Leading settlements by colonists from Virginia and North Carolina 1769. Territory of Tennessee formed 1794; admitted as a State June 1, 1796, third State to enter Union after adoption of Federal Constitution. Scene of many important events of Civil War. Seceded February, 1861. Readmitted February, 1870.

Area.—Total area, 42,050 square miles; land, 41,750; water, 300; extreme length, 432 miles; width, 109. Counties, 96.

Physical Features.—Naturally divided into three parts, East, Middle, and West Tennessee. Surface mountainous in East, Alleghanies (height 5,000 to 6,000 feet), and Cumberland Plateau (elevation 2,000 feet); lower in Middle and West. Highest altitude in State, Mt. Leconte, 6,612 feet. Extent and importance of navigable waters notable; over 2,200 miles of available waterway. Forest lands, 17,000,000 acres.

Climate.—Winters generally short and mild; summers long; heat tempered by general elevation of State. Rainfall plentiful. Mean annual rainfall at Nashville, 50.1 inches; mean annual temperature, 59.4 deg.; highest, 104 deg; lowest, 10 deg. below.

Agriculture.—Principal products: Cotton, 1899, 192,263 bales, value $6,950,307; wheat, 1900, 11,696,088 bushels; oats, 5,810,166; corn, 56,997,880; hay, 313,432 tons; tobacco, 1898, 45,000,000 pounds; peanuts, 523,088 bushels, $523,013; sweet potatoes, 1,973,625 bushels, $986,812. Value of tomatoes, strawberries, melons, 1895 $250,000. Apples and small fruits grown in abundance. Value of farm animals, 1900, $58,043,895. Poultry, 1897, $6,000,000. Estimated value of milk, butter, and cheese, $20,000,000. Wool clip, 1901, 1,253,032 pounds.

Manufactures.—Iron industries include blast furnaces, foundry and machine shops, rolling mills, and nail factories. Value of manufactured products, 1900, $108,608,799. Pig iron produced in year 1900, 362,190 long tons, coke, 475,432 tons, value $1,269,555. Ammoniated phosphate, 454,491 tons, $1,328,707. Annual value of lumber, $18,000,000.

Minerals.—Gold discovered 1831; output to 1900 about $200,000. Coal area, 5,100 square miles; output, 1900, 3,708,562 tons, value $4,223,082. Iron belt, 5,400 square miles along Tennessee River; output, 1900, 594,171 tons, value $669,087; copper, 116,000 tons. State leads in marble for interior decoration; value of output, $424,054; limestone, $238,505; output of phosphate rock, 1900, 454,491 long tons, value $1,328,707.

Population.—1790, 35,691; 1830, 1,767,518; 1900, 2,020,616. Male, 1,021,224; female, 999,392; native, 2,005,780; foreign, 17,746; white, 1,540,186; colored, 480,430; Africans, 480,243; Chinese, 75; Japanese, 4; Indians, 108.

Principal Cities.—*Nashville*, capital, chief center of manufactures and third hardwood market in the world; prominent educational center; population, 1900, 80,865. *Memphis*, largest city and largest commercial center on Mississippi River between St. Louis and New Orleans; population, 102,320. *Knoxville*, leading commercial and industrial center of East Tennessee; population, 32,637. *Chattanooga*, important commercial, railway, and manufacturing city; population, 30,154.

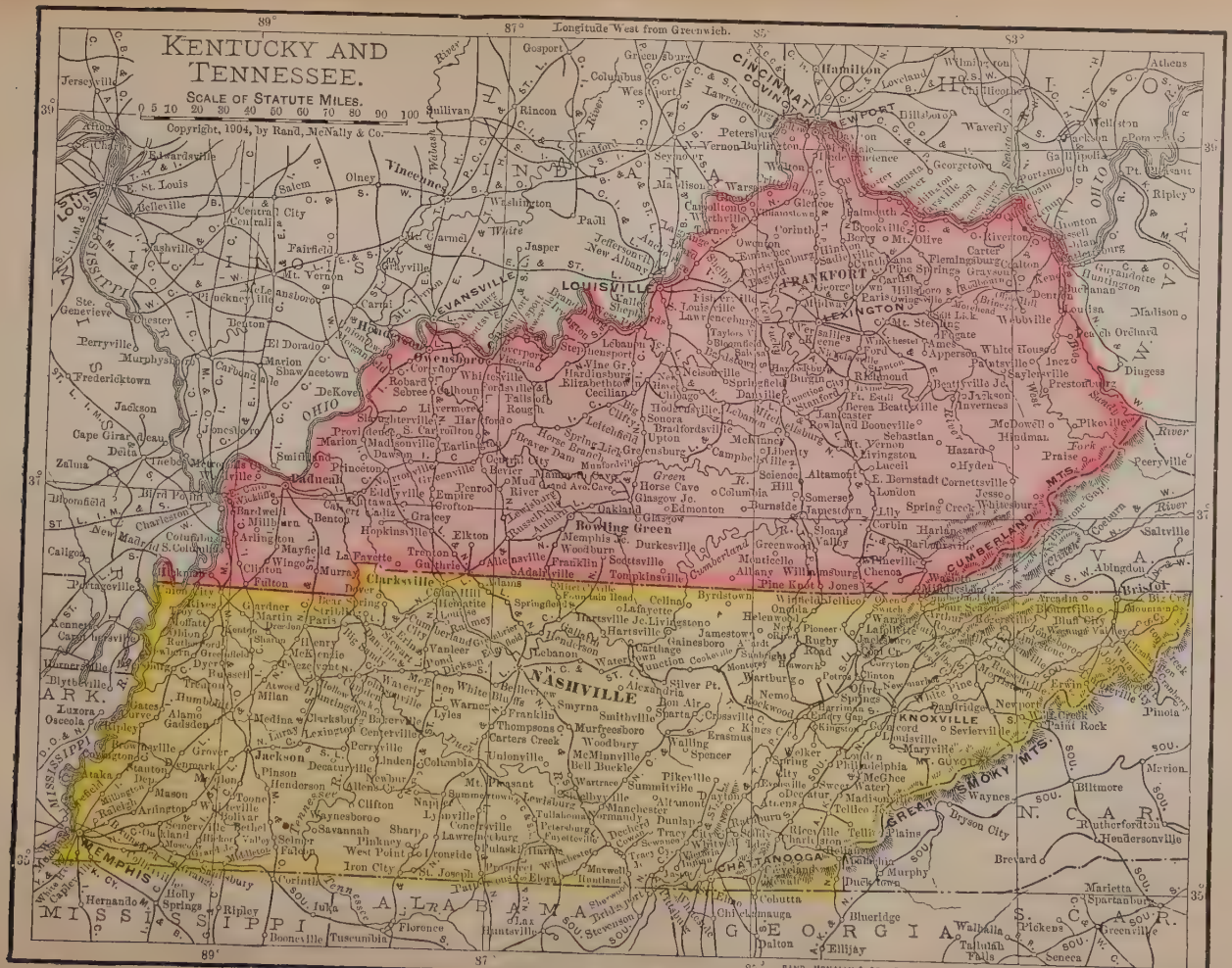
Railways.—First railroad—Nashville to Chattanooga—completed 1853. Miles open, 1855, 466; 1865, 1,296; 1875, 1,630; 1885, 2,151; July, 1900, 3,124.22.

Education.—Enrollment, 1899-00, 691,570; expenditure, $1,751,047; school age, 6-21. Educational institutions include the University of Tennessee, at Knoxville; Vanderbilt University and University of Nashville, at Nashville; and University of the South, at Sewanee.

Political.—State elections, biennial; State, congressional, and presidential elections, Tuesday after first Monday in November. Senators, 33; Representatives, 99; term, 2 years; sessions biennial. Electoral votes, 12. Voters must be actual citizens, residents of State 1 year, of county 6 months; limited registration; ballot reform. Convicts excluded.

Legal Holidays.—January 1, February 22, Good Friday, May 30, July 4, first Monday in September, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, 10 years; open accounts, contracts, 6; notes, 6; redemption of tax sales, 2 years. Legal interest rate, 6 per cent.


KENTUCKY AND TENNESSEE.
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60 70 80 90 100
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Longitude West from Greenwich.
LOUISVILLE
NASHVILLE
KNOXVILLE
CINCINNATI
FRANKFORT
LEXINGTON
EVANSVILLE
Paducah
Bowling Green
Clarksville
Hopkinsville
Owensboro
Henderson
Madisonville
Columbus
Hickman
Fulton
Union City
Dresden
Trenton
Gallatin
Springfield
Danville
Harrodsburg
Nicholasville
Winchester
Richmond
Mt. Sterling
Maysville
Ashland
Paris
Georgetown
Versailles
Shelbyville
Frankfort
Lawrenceburg
Madison
Jeffersonville
New Albany
Corydon
Salem
Vincennes
Washington
Jasper
Princeton
Mayfield
Murray
Benton
Cadiz
Eddyville
Kuttawa
Smithland
Marion
Carrollton
Madisonville
Hartford
Elizabethtown
Hardinsburg
Lebanon
Campbellsville
Columbia
Glasgow
Edmonton
Burkesville
Tompkinsville
Scottsville
Franklin
Gallatin
Lebanon
Carthage
Gainesboro
Cookeville
Sparta
Crossville
Kingston
Harriman
Oak Ridge
Clinton
Maryville
Alcoa
Knoxville
Sevierville
Newport
Cocke
Greene
Washington
Sullivan
Unicoi
Carter
Johnson
Ashe
Watauga
Avery
Mitchell
Yancey
Madison
Buncombe
Henderson
Transylvania
Rutherford
Polk
Cleveland
Bradley
Hamilton
Marion
Sequatchie
Rhea
Meigs
Roane
Anderson
Campbell
Scott
Morgan
Fentress
Pickett
Overton
Putnam
White
Cumberland
Jackson
Clay
Wayne
Hickman
Perry
Lewis
Wolfe
Powell
Claiborne
Grainger
Hancock
Hawkins
Greene
Cocke
Sevier
Blount
Monroe
Loudon
Roane
Knox
Union
Anderson
Campbell
Scott
Fentress
Pickett
Overton
Putnam
White
Cumberland
Jackson
Clay
Wayne
Hickman
Perry
Lewis
Wolfe
Powell
Lee
Estill
Madison
Jessamine
Woodford
Scott
Owen
Gallatin
Carroll
Trimble
Henry
Shelby
Oldham
Jefferson
Bullitt
Spencer
Nelson
Washington
Marion
Boyle
Mercer
Anderson
Franklin
Grant
Pendleton
Kenton
Boone
Gallatin
Carroll
Trimble
Henry
Shelby
Oldham
Jefferson
Bullitt
Spencer
Nelson
Washington
Marion
Boyle
Mercer
Anderson
Franklin
Grant
Pendleton
Kenton
Boone
Ohio River
Mississippi River
Tennessee River
Cumberland River
Kentucky River
Green River
Big Sandy River
Licking River
Barren River
Salt River
Rolling Fork
Pond River
Tradewater River
Obion River
Forked Deer River
Hatchie River
Wolf River
Loosahatchie River
Big Hatchie River
Nolichucky River
French Broad River
Holston River
Clinch River
Powell River
Cumberland Mountains
Cumberland Gap
Great Smoky Mts.
Unaka Mts.
Black Mts.
Pine Mts.
Log Mt.
Walden Ridge
Sand Mt.
Lookout Mt.
Raccoon Mts.
Missionary Ridge
Chilhowee Mts.
Bald Mt.
Stone Mts.
Iron Mts.
Blue Ridge
Brushy Mts.
Bays Mts.
Holston Mts.
Clinch Mts.
Powell Mts.
Cumberland Mts.
Kentucky
Tennessee
Indiana
Illinois
Missouri
Arkansas
Mississippi
Alabama
Georgia
North Carolina
South Carolina
Virginia
Ohio
West Virginia
Rand, McNally & Co., Engravers Chicago.

OHIO. O-hi'-o. "Buckeye State."

Indian—"Beautiful."

Historical.—Earliest explorations made by French under La Salle about 1680. In 1748, English traders established themselves near present site of Piqua. Territory claimed by both French and English 1754-63; ceded to Great Britain 1765; became part of United States 1783. First permanent settlement made at Marietta 1788. Columbia established 1788, Fort Washington 1789, Losantiville 1790, the three now included in Cincinnati Became part of Northwest Territory 1787; admitted to the Union 1803; fourth State admitted after formation of Government; present limits established 1836.

Area.—Total area, 41,060 square miles; land, 40,760; water, 300, breadth, 225 miles; length, 205. Counties, 88.

Physical Features.—General surface an undulating plain divided by main watershed into two unequal slopes; waters of the northern and smaller slope flow into Lake Erie; the southern into the Ohio and Mississippi rivers. State has a large extent of lake and river frontage. Frontage on Lake Erie, 230 miles; on Ohio River, 436. Muskingum River navigable for 100 miles. Highest elevation, Hogue's Hill, Logan County, 1,540 feet; lowest in the southwest, 440 feet; mean, 750 feet.

Climate of Northern Ohio modified by influence of Lake Erie. Mean average temperature, 48 deg. to 50 deg.; Southern Ohio mild and healthful, though subject to sudden and severe changes; average temperature, 52 deg. to 54 deg. Mean annual rainfall at Columbus, 38.9 inches; mean annual temperature, 52.3 deg.; highest, 103 deg.; lowest, 20 deg. below.

Agriculture.—One of the leading agricultural States. In 1900 ranked third in production of winter wheat, sixth in potatoes, seventh in corn. Area under cultivation, 1899, 10,239,866 acres. Crops, 1900: Corn, 106,890,188 bushels, value $36,342,664; wheat, 8,523,876 bushels, value $6,051,952; oats, 40,340,534 bushels, value $10,488,539; barley, 622,566 bushels, value $267,703; rye, 513,023 bushels, value $282,163; buckwheat, 147,632 bushels, value $85,627, potatoes, 12,561,584 bushels, value $5,024,634, hay, 1,559,242 acres, 1,652,797 tons, value $18,263,407. Tobacco crop, 1899, was 56,242 acres, 52,484,457 pounds; flax, 3,500 acres, 31,797 bushels of seed, 1,833,781 pounds of fiber; broom corn, 907 acres, 669,475 pounds of brush.

Horticulture, Etc.—Extensive capital invested in horticulture, floriculture, and viticulture. Ohio wines rank high among American vintages. Orchard products, 1899: Apples, 315,486 acres, 11,077,213 bushels; peaches, 30,309 acres, 146,636 bushels; pears, 3,178 acres, 73,236 bushels; cherries, 1,393 acres, 35,027 bushels; plums, 1,685 acres, 20,392 bushels; other small fruits, 7,206 acres, 305,563 bushels. Total area orchards, 159,257 acres. Vineyards, 13,629 acres; grapes gathered, 31,127,743 pounds. Bee-hives, 47,423; honey, 1,052,616 pounds; maple sugar, 1900, 641,733 pounds; syrup, 983,667 gallons.

Live Stock, Etc.—Live stock and live-stock products of great value; State ranks second in number and value of swine. Area under pasture, 5,722,389 acres. Number and value of farm animals, June, 1900: Horses, 878,205, $50,159,245; milch cows, 818,239, $24,725,382; other cattle, 1,235,074, $21,834,864; mules, 16,771, $941,211; sheep, 4,020,628, $10,956,308; hogs, 3,188,563, $11,813,168; wool clip, 1901, 13,370,553 pounds. Milk sold for family use, 1900, 40,590,560 gallons Butter produced, 48,103,700 pounds; home product, 42,241,804 pounds; factory, 5,861,896 pounds. Cheese, 16,323,054 pounds, home product, 1,029,518 pounds; factory, 15,293,536 pounds. Eggs produced, 60,376,115 dozen; shipped from State, 842,085 dozen.

Fisheries.—Ohio occupies first place in Lake Erie fisheries. Interest in fish culture increasing rapidly. In 1901, 85,000,000 pike perch were hatched and liberated in Lake Erie waters. Black bass, marble cat, and crappies are hatched for inland waters. Total Lake Erie catch, 1899, 58,393,864 pounds; Ohio boats employed, 1896, 179; men, 463. Interior fisheries in Grand, Licking, Lewistown, and Loramie reservoirs, and in Ohio River. Catch, 1896, 1,239,308 pounds; black bass, 185,853 pounds. Fisheries of Grand Reservoir—largest artificial body of water in the world—equal in extent all others in State.

Manufactures.—One of the foremost manufacturing States Many prominent and growing industries. Growth due to great natural advantages and wealth of raw material. Industrial establishments include rolling mills, agricultural implement, iron, and paper manufactories, glass factories, breweries, distilleries, etc. In 1900, 32,398 establishments report a combined capital of $605,792,266; value of products manufactured, $832,438,113. Capital invested in breweries, $31,444,509; agricultural implements, $23,628,442. Output of iron and steel manufactures, $138,935,256. In 1900, State ranked first in value of pottery produced; ranked second in production of pig iron. Output of pig iron, 2,470,911 tons; coke, 72,116 short tons, value $194,042. Value of lime, $2,709,481; brick and tile, $9,731,305; pottery, $8,573,323—white granite, $2,767,837, decorated, $1,052,680; Portland cement, 1896, 153,082 barrels, $267,892. Maple sugar, 399,420 pounds; syrup, 637,351 gallons. In 1900-01, State ranked fourth in production of distilled spirits, and fifth in fermented liquors. Output distilled spirits, 8,919,840 gallons; fermented liquor, 3,203,862 barrels. Wine, 1898, 465,656 gallons. Oleomargarine, 1901, 16,436,961 pounds.

Minerals.—Sandstone underlies over one-half the total area. State leads all others in value of sandstone quarried: limestone, quarried in thirty-two counties, second in importance; minerals include coal, iron, glass sand, clays, salt, oil, and gas. Coal area, 10,000 square miles; output, 1900, 18,988,150 short tons, value $19,292,246. Valuable deposits of clay worked for pottery, earthenware, and brick. Value of limestone quarried, 1900, $1,969,387; sandstone, $1,683,980; salt (fourth State) 1,425,283 barrels, $696,326; iron ore, 61,016 tons; crude petroleum, 22,362,730 barrels, value $24,091,601. Ranks third in production of natural gas; value of output, $2,178,234. Gypsum, 30,034 short tons.

Population.—Ranked eighteenth in 1800; fourth, 1830; third, 1870; fourth, 1890 and 1900; population, 1800, 45,365; 1830, 937,903; 1870, 2,665,260; 1890, 3,672,316; 1900, 4,157,545. Male, 2,102,655; female, 2,054,890; native, 3,698,811; foreign, 458,734; white, 4,060,204; colored, 97,341; Africans, 96,901; Chinese, 371; Japanese, 27; Indians, 42.

Cities.—*Cleveland*, metropolis of Northern Ohio, settled 1796; an important railroad and steamboat center; has large iron and steel manufactories and oil refineries; population, 1900, 381,768. *Cincinnati*, metropolis of Ohio Valley; founded 1788, has extensive trade by railroad and river; population, 325,902. *Toledo*, on Lake Erie, has a fine harbor; an important shipping and railroad center; population, 131,822. *Columbus*, capital, prominent railroad center; population, 125,560. *Dayton*, on Great Miami River, in vicinity of important limestone quarries; has flourishing manufactures; population, 85,333. *Youngstown*, flourishing town in center of region rich in iron, coal, and limestone; population, 44,885.

Railways.—First railroad built and operated west of New York—Erie & Kalamazoo, Toledo to Adrian, Mich.—constructed 1836. Number miles, 1840, 30; 1850, 575; 1855, 1,486; 1860, 2,946; 1865, 3,331; 1870, 3,538; 1875, 4,461; 1880, 5,792; 1885, 7,304; 1890, 7,988; June, 1896, 8,726.29; June, 1900, 8,774.97, averaging 21.18 miles to each 10,000 inhabitants. In 1896 there were 600 miles of canals in Ohio.

Education.—Public school enrollment, 1899-00, 1,179,600; expenditure, $13,335,211; school age, 6-21; compulsory school law age, 8 to 14-16, unless at work; text-books may be furnished. Public high schools, 678; private secondary schools, 49. Ohio State University, Columbus; Ohio University, Athens; Oberlin College, Oberlin; Miami University, Oxford; Western Reserve University and Case School Applied Science, at Cleveland.

Political.—State elections annual. State, congressional, and presidential elections, Tuesday after first Monday in November; number of Senators, 37; Representatives, 112; term, 2 years; sessions, biennial, in odd-numbered years, first Monday in January; limit of session, none. Number of electoral votes, 23. Voters must be actual citizens, residents of State 1 year, county 60 days, town and precinct 20 days; limited registration; ballot reform. Idiots, insane, and convicts, unless restored to citizenship, excluded. Women may vote on school matters.

Legal Holidays.—January 1, February 22, May 30, July 4, first Monday in September, general election day, Thanksgiving, December 25.

Legal.—Judgments: Recovery of real estate, 21 years; written contracts, 15; unwritten, 6; personal actions, 1. Redemption of tax sales, 2 years. Legal interest, 6 per cent; by contract, 8.

OHIO
SCALE OF STATUTE MILES.
0 10 20 30 40 50 60 70 80
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RAND, MCNALLY & CO., ENGRAVERS, CHICAGO.
Longitude West from Greenwich
84°
82°
80°
40
633
COLUMBUS
CINCINNATI
PITTSBURG
Steubenville
Youngstown
Akron
Cleveland
Toledo
Findlay
Springfield
Dayton
Hamilton
Portsmouth
Zanesville
Newark
Mansfield
Marietta
Parkersburg
Huntington
Ashland
Ironton
Middlebourne
Moundsville
Wheeling
Martins Ferry
Bellaire
Barnesville
Cambridge
Caldwell
Cadiz
Jewett
Carrollton
Canton
Massillon
Wooster
Ashland
Sandusky
Fremont
Bellevue
Norwalk
Milan
Huron
Vermilion
Lorain
Elyria
Oberlin
Medina
Wadsworth
Barberton
Ravenna
Warren
Niles
Youngstown
Sharon
New Castle
Beaver
Rochester
Allegheny
Sewickley
Washington
Wellsburg
Weston
Clarksburg
Fairmont
Grafton
Harrisville
Spencer
Ripley
Point Pelee
Pt. Pelee I.
Put-in-Bay
Kelleys I.
Middle Bass I.
North Bass I.
Johnson I.
Kelleys Island
Sandusky Bay
Maumee Bay
Lake Erie
Ohio River
Scioto River
Muskingum River
Hocking River
Kanawha River
Little Kanawha R.
Big Sandy R.
Tygarts Val. R.
Monongahela R.
Youghiogheny R.
Licking River
Kentucky
West Virginia
Pennsylvania
Michigan
Indiana

INDIANA. In-de-an'-ah. "Hoosier State."

Derived from "Indian."

Historical.—Originally a part of New France. Visited by Jesuits 1672. First permanent settlement made by French at Vincennes 1702. Ceded to Great Britain 1763; Vincennes captured by Colonel Clark of Virginia 1779; ceded to United States 1783; became part of Northwest Territory 1787. Indians defeated by Harrison at Tippecanoe 1811. Indian Territory organized 1800; admitted into the Union, December 11, 1816. State constitutions adopted 1816 and 1851, the latter having since been modified.

Area.—Total area, 36,350 square miles; land, 35,910; water, 440; extreme length, 276 miles; average breadth, 145 miles. Counties, 92.

Physical Features.—Surface generally level and undulating, State occupying a broad table-land inclining gradually toward the southwest. Highest altitude in Randolph County, 1,140 feet; lowest at mouth of Wabash, 370 feet; mean average, 735 feet. Has 60 miles of coast line on Lake Michigan and 550 miles of navigable river boundary. Ohio River forms entire southern boundary; Wabash, most important river, drains three-fourths of entire area.

Climate generally healthful, but variable; northerly and northwesterly winds prevail in winter. Mean annual rainfall at Indianapolis, 43.0 inches; mean annual temperature, 52.7 deg.; highest, 101 deg.; lowest, 25 deg. below.

Agriculture leading industry. Valleys of Wabash, White, and Whitewater rivers most fertile sections. In 1900 Indiana ranked next to Kansas in production of winter wheat, sixth in corn, and fourth in oats. Acreage and yield of crops, 1900: Wheat, 6,411,702 bushels, value $4,488,191; corn, 153,200,800 bushels, value $49,024,256; oats, 44,866,035 bushels, value $10,319,188; rye, 485,722 bushels, value $242,861; barley, 185,533 bushels, value $87,201; buckwheat, 70,154 bushels, value $42,794; hay, 1,663,452 tons, value $16,218,657; tobacco, 1896, 8,130,760 pounds, $365,884; Irish potatoes, 1900, 9,060,529 bushels, $3,443,001; sweet potatoes, 1898, 2,215 acres, 150,062 bushels; sorghum, 8,851 acres; sugar beets, 1,286 acres.

Horticulture.—Apples, pears, plums, peaches, and small fruits cultivated extensively. Peach district along the Ohio and in southwestern and eastern sections. Wine culture begun by Swiss settlers of Vevay, 1813. Bearing apple trees, 1898, 5,250,082; peach, 2,655,263; pear, 512,019; plum, 505,302; cherry, 711,005; quince, 118,868; grape vines, 1,849,356. Value of trees in nursery stock, $129,947. Acres in strawberries, 12,756; raspberries, 22,465. Fruit sold, 1897: Apples, 637,740 bushels; peaches, 77,998; pears, 18,987. Apple crop, 1898, 605,000 barrels.

Live Stock.—Stock raising and dairy farming important industries. Acres under pasture, including woodland, 8,506,738. Milk consumed and sold from farms, 1898, 129,406,908 gals.; butter, 35,953,710 pounds; cheese, 1,279,849 pounds; poultry, 1,955,181 dozens; eggs, 34,992,097 dozens. Number and value farm animals, June, 1900: Horses, 751,715, value $40,641,988; mules, 66,717, $3,717,083; sheep, 1,742,002, $5,794,976; milch cows, 574,276, $18,285,504; other cattle, 1,110,202, $22,679,940; swine, 3,763,389, $18,804,893; wool clip, 1901, 6,635,837 pounds.

Manufactures.—The notable growth in manufacturing industries has been due largely to the discovery and development of natural gas. Among the most important manufactures are glass and tin plate. Number of glass factories, 1900, 110; capital, $12,775,389; value products, $14,757,883; wages paid, $7,226,047; employés numbered 13,000. There are 5 tin plate establishments, employing 2,500, with an output valued at nearly $5,500,000. Oil refineries: Petroleum, 1; linseed oil, 2; value of output, 1898, $10,553,000. Number of woolen mills, 1900, 20; product, $1,491,218; cotton mills, 4, $1,335,007. Value of pottery, $325,900; total brick and tile, $3,532,450. State ranks third in production of distilled spirits; output, 1900-01, 18,885,398 gallons; fermented liquor, 897,277 barrels; grape wine, 1898, 140,403 gals.; cider, 59,974 barrels; cider vinegar, 31,278 barrels. Value of agricultural implements, etc., manufactured, 1900, about $6,500,000; engines, etc., $17,228,096; furniture, $8,769,500; iron and steel products, $19,338,480; paper and paper goods, $4,556,020; railway construction, etc., $20,000,000; wagons, etc., $12,742,243; meat packing, etc., $42,891,243, planing mills, $5,088,669; flouring and grist mill products, $30,150,766; factory-made clothing, $3,367,831; printing and publishing, $6,000,000. Value all textile goods, $5,250,529. Maple syrup, 1898, 110,159 gals.; maple sugar, 36,734 pounds. Approximate amount of lumber produced, 273,516,000 feet; mill value, $4,307,355. In 1898 State ranked second in fruit and vegetable packing. A large pottery has recently been established at Brazil.

Mineral Resources.—Coal mines, quarries of building stone, clay deposits, petroleum, and natural gas wells are the State's most valuable resources. Salt and medicinal springs are found in the south. Coal measures are bituminous, including Indiana block—600 square miles—coking and cannel coals; total area, 7,000 square miles. In 1900 State ranked second in natural gas, fourth in petroleum, and sixth in production of coal. Coal mines, 1897, 115; output, 1900, 6,484,086 short tons; value $6 687,137. Area of natural gas, 2,500 square miles, value of output, $7,254,539. Development and output of oil fields increasing steadily. Number of oil wells producing, 4,546; total production valued at $7,254,539; output mostly from Trenton and Terre Haute wells.

Quarries.—In 1900 State ranked sixth in clay products and seventh in building stone. Number of stone quarries, 1897, 37, 2,494 acres; stone quarried, 30,079 carloads; employés, 4,386. In 1900, Indiana ranked next to Pennsylvania in total value of limestone, but first in value of stone for building and road-making; total value of output, $2,314,818; for road-making, $1,639,985. Value of oölitic limestone output, 1897, $2,300,000.

Population.—Ranked twenty-first in 1800, eighth in 1830 and 1900. Total population in 1800, 5,641; 1830, 2,192,404; 1900, 2,516,462. Male, 1,285,404; female, 1,231,508; native, 2,374,341; foreign, 142,121; white, 2,453,502; colored, 57,960; Africans, 57,505; Chinese, 207; Japanese, 5; Indians, 243.

Cities.—*Indianapolis*, capital and metropolis, one of most important distributing points in Central States; chief industries, meat packing and manufactures of iron, furniture, wagons, and bicycles. Population, 1900, 169,164. *Evansville*, second city in size, commercial center of southwestern part of State; has important manufactures; population, 1900, 59,007. *Ft. Wayne*, on the Maumee, leading manufacturing and business center of Northeastern Indiana. Population, 1900, 45,115. *Terre Haute*, commercial, manufacturing, and educational center; population, 1900, 36,673. *South Bend*, important manufacturing town on St. Joseph River; population, 35,999. *New Albany*, flourishing manufacturing town; large glass manufactories; population, 20,628.

Railways.—Miles in operation, 1846, 22; 1850, 111; 1855, 1,406; 1860, 2,163; 1865, 2,217; 1870, 3,177, 1875, 3,963; 1880, 4,373; 1885, 5,614; 1890, 6,106; June, 1896, 6,373, June, 1900, 6,469.61, 18.02 miles per 100 square miles.

Education.—Common school system in operation since 1853. Public school enrollment 1900, 743,330; school buildings, 10,038; value $23,244,630; compulsory school age, 8-14. Text-books furnished to indigent children. Purdue University, Lafayette, opened 1874; State University, Bloomington, opened 1824; De Pauw Univ., Greencastle; Rose Polytechnic Institute, Terre Haute; Wabash College; Univ. of Notre Dame, South Bend. Public Normal Schools, Indianapolis and Terre Haute.

Political.—State elections, biennial. State, congressional, and presidential elections, Tuesday after first Monday in November; number of Senators, 50; Representatives, 100; sessions biennial, in odd-numbered years, Thursday after first Monday in January; limit of session, 61 days; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 15. Voters must be citizens or declared intention, residents of State 6 months, county and town 60 days, precinct 30 days; registration not required; ballot reform. Convicts excluded. Limited woman suffrage.

Legal Holidays.—January 1, February 22, May 30, July 4, first Monday in September, Thanksgiving, December 25, public fast, and election.

Legal.—Statutes of limitation: Personal actions, 2 years; open accounts, contracts not in writing, 6; promissory notes, written evidence of debt, 10; other written contracts, judgments, real actions, 20. Redemption of tax sale, 2 years. Legal interest, 6 per cent; by contract, 8.

87° Longitude West from Greenwich. 86°
88
85
CHICAGO
MICH.
Michigan City
SOUTH BEND
Elkhart
FT. WAYNE
INDIANAPOLIS
TERRE HAUTE
EVANSVILLE
NEW ALBANY
LOUISVILLE
FRANKFORT
Jolliet
Kankakee
Lafayette
Marion
Anderson
Richmond
Connersville
Greensburg
Columbus
Seymour
Madison
Vincennes
Washington
Princeton
Rockport
Corydon
Shelbyville
Greenfield
Greencastle
Crawfordsville
Logansport
Peru
Wabash
Huntington
Decatur
Bluffton
Portland
Hartford City
Muncie
Anderson
Kokomo
Frankfort
Lebanon
Noblesville
Tipton
Shelbyville
Franklin
Martinsville
Bloomington
Columbus
Seymour
Jeffersonville
New Albany
Salem
Orleans
Paoli
Mitchell
Bedford
Vincennes
Washington
Petersburg
Jasper
Huntingburg
Rockport
Boonville
Princeton
Evansville
Henderson
Owensboro
Irvington
Cloverport
Hardinsburg
Scottsburg
Lexington
Vienna
Henryville
Otisco
Charlestown
Jeffersonville
Clarksville
New Albany
Corydon
Leavenworth
Tell City
Troy
Derby
Lacon
Mauckport
West Point
Brandenburg
Rockport
Grandview
Dale
St. Meinrad
Ferdinand
Jasper
Huntingburg
Loogootee
Washington
Petersburg
Princeton
Oakland City
Fort Branch
Somerville
Mt. Vernon
Grayville
New Harmony
Carmi
Wabash R.
Ohio R.
Kentucky R.
Illinois
Indiana
Ohio
Kentucky
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60
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88° R., MCN., & CO., ENGR'S, CHI.
87°
86°
85°

INDIANA.

ILLINOIS. Il-lin-oi'. "Prairie or Sucker State."

From Indian "Illini," men, and French, "ois," tribe of men.

Historical.—Eighth State admitted into the Union. First visited by Marquette and Joliet in 1673. Fort St. Louis founded by LaSalle in 1679. French settled at Cahokia and Kaskaskia, 1682; ceded to Great Britain 1763, United States 1783; became part of Northwest Territory 1787, Indiana Territory 1800. Illinois Territory organized 1809; State admitted to the Union 1818; Kaskaskia first capital; seat of government removed to Vandalia 1818, to Springfield 1837. Black Hawk War 1832. Mormon troubles 1840-44. Second constitution adopted 1848, present constitution ratified 1870.

Area.—Total area, 56,650 square miles; land, 56,000; water, 650; greatest length, 385 miles; breadth, 218. Counties, 102.

Physical Features.—One of the most level States in the Union. Occupies a great plain, sloping almost imperceptibly from highest section in north on Lake Michigan to southern extreme, 350 feet above sea level. Greatest elevation in Jo Daviess County, 1,150 feet; average for State, 500 feet. Mississippi River forms entire western boundary; extent of frontage, 700 miles; Wabash River on the east and Ohio on the south. Illinois has 4,000 miles of navigable streams; Illinois River the largest within the State. Important artificial waterway—Chicago Drainage Canal, Chicago to Joliet, 40 miles—affording Lake Michigan an outlet to Mississippi River through channel of Illinois, opened January 2, 1900. Estimated minimum discharge, 300,000 cubic feet per minute; maximum, 600,000 cubic feet. Cost of work, $33,000,000. Coast line on Lake Michigan, 60 miles.

Climate, throughout the State, generally healthful and bracing. Mean annual rainfall at Springfield, 38.0 inches; mean annual temperature, 52.8 deg.; highest temperature, 102 deg.; lowest, 22 deg. below. Mean annual rainfall, *Chicago*, 37.57 inches; mean annual temperature, 49.4 deg.; January, 25.5 deg.; July, 72.9 deg. Annual rainfall, *Cairo*, 46.74 inches; temperature, 57.8 deg.

Agriculture.—State has 42,000 square miles of land suited to growth of cereals. Ranks first in production of oats, second in corn, fourth in potatoes. Winter wheat in south and southwest; central sections produce most corn. Soil especially adapted to culture of sugar beet; beet-sugar factory, with a capacity of 700 tons, established at Pekin. Area and yield of farm products, 1900: Corn, 264,176,226 bushels, value $84,536,392; oats, 133,642,884 bushels, value $30,737,863; wheat, 17,982,068 bushels, value $11,508,524; broom corn, 24,590 acres, value $575,732; Irish potatoes, 15,296,104 bushels, value $6,271,403; sweet potatoes, 300,570 bushels, value $216,934; tobacco, 4,474 acres, 2,689,306 pounds, value $197,425; hay, 2,119,419 tons, value $17,803,120; honey, 421,469 pounds, value $56,546; beehives, 55,101.

Horticulture established 1840-50. One of the foremost States engaged in the industry. Most productive fruit areas are toward the southern section. Yield and value of fruit products, 1900: Apples, 962,489 bushels, value $865,355; peaches, 148,797 bushels, $104,836; pears, 11,336 bushels, $9,079; grapes, 1,197 acres, 1,270,825 pounds, $23,867. Value of strawberries, 1901, $48,707; watermelons, $46,759.

Live Stock and Dairy.—Area under pasture, 4,669,270 acres. Number and value of farm animals, June, 1900: Horses, 1,350,219, value $69,698,100; mules, 124,644, $7,420,511; sheep, 1,030,581, $3,076,642; milch cows, 1,077,604, $34,279,218; other cattle, 2,096,346, $47,891,689; swine, 5,915,463, $23,616,781. Total value $186,856,020. Wool clip, 1901, 4,103,021 pounds Poultry sold, 1901, $1,361,294; eggs, $1,115,275; milk, 1900, 123,516,667 gallons, value $16,119,030; cream, 1,204,479 gallons, value $678,006; butter, 14,987,887 pounds, value $3,073,146; cheese, 762,010, value $113,807

Fisheries.—The large water-courses within the State or along its boundaries afford an abundant and varied supply of food-fishes. Among the interior States Illinois leads all others in extent and value of fisheries. Ranks first in fishing population, capital invested, and extent and value of catch Number of persons employed, 1,650; capital invested, $156,000; catch, 11,500,000 pounds; value $333,000.

Manufactures.—Chief manufacturing cities of Illinois are Chicago, Aurora, Elgin, Joliet, Bloomington, and Springfield. In 1900 there were 38,360 establishments in State, employing 439,452 persons; capitalization, $776,829,598; wages and salaries paid, $234,848,426; value of products, $1,259,571,105. Total value of manufactured products of Chicago, 1900, was $888,736,311. In 1901, 41,610,285 pounds of oleomargarine manufactured in State. State leads all others in manufacture of distilled spirits; product, 1900-01, 39,357,780 gals.; ranks third in fermented liquor; product, 3,685,320 barrels, wine product, 1898, 91,347 gals., value $80,033; sorghum syrup, 887,257 gallons; value $289,310. Illinois one of the foremost States in production of steel; output of Bessemer steel ingots, 1900, 1,115,571 long tons; rails, about 400,000 tons; wire nails, Indiana and Illinois, 2,195,672 kegs. Ranks third in production of pig iron, output 1,363,383 tons. Value of brick and tile, $6,932,086; common brick, $3,981,577; fire proofing, $76,341; pottery, $776,773; lime, $246,575.

Minerals.—Coal first discovered near Ottawa, 1698. Illinois second only to Pennsylvania in production of bituminous coal; area, 37,000 square miles. Number of counties producing coal in 1900, 52; mines and openings, 920; total output of all mines, 25,767,981 short tons; number of shipping mines, 350; output, 22,955,737 tons; output of local mines, 2,002,884 tons, total tons of lump coal, 13,927,899. The aggregate home value of total product, $26,927,185. Total number of employés, 39,384. In 1900 Illinois ranked eighth in total value of limestone and second in value of limestone for building purposes; total value, $1,900,292; sandstone, $19,141. Petroleum, 250 barrels, value $1,500; spelter, Indiana and Illinois, 38,750 short tons.

Population.—Ranked twenty-fourth in 1810 and 1820; eleventh in 1850, fourth in 1880, and third in 1890 and 1900. Total population, 1810, 12,282; 1850, 851,470; 1880, 3,077,871; 1890, 3,826,351. Population, census 1900, 4,821,550. Male, 2,472,782; female, 2,348,768; native, 3,854,803; foreign, 966,747; white, 4,734,873; colored, 86,677; Africans, 85,078; Chinese, 1,503; Japanese, 80; Indians, 16.

Cities.—*Chicago*, situated on Lake Michigan, is the metropolis of Illinois and second city in size in the United States; has a vast lake commerce and large export trade by rail; extensive manufacturing industries. Population, 1890, 1,099,850; census of 1900, 1,698,575, an increase in ten years of 54.4 per cent; area, 189 square miles. *Springfield*, capital, has manufactures of woolens, paper, pulp, iron and steel goods, etc.; center of coal industry. Population, 1900, 34,159. *Peoria*, second city in size, has an extensive grain trade; chief industries, distilling and manufacture of agricultural implements and glucose. Population, 1900, 56,100. *Quincy*, population, 1900, 36,252. *Rockford*, population, 31,051.

Railways.—Illinois ranks first in railway mileage. State has 6 per cent of total mileage of United States. Number of miles of railway in 1850, 111; 1860, 2,790; 1870, 4,823; 1880, 7,851; 1890, 10,115.90; 1895, 10,620.19; July, 1900, 10,997.33. Number of miles per 100 square miles of territory, 19.65; per 10,000 inhabitants, 22.82.

Education.—School system founded 1855; township high schools first established 1867. Public school enrollment, 1899-00, 1,362,700; private, 142,496; expenditure, $17,757,145. School age, 6-21; compulsory school age, 7-14. Text-books furnished to indigent children. Public high schools, 344. Northwestern University, Evanston; University of Chicago, 1893; University of Illinois, Urbana; Illinois College, 1829; others: Lake Forest; Lincoln; Knox; Rockford (women); four normal schools.

Political.—State, congressional, and presidential elections Tuesday after first Monday in November; number of Senators, 51; Representatives, 153; sessions biennial, in odd-numbered years, meeting Wednesday after first Monday in January; limit of session, none; term of Senators, 4 years; Representatives, 2 years. Electoral votes, 24. Voters must be actual citizens; residents of State 1 year, of county 90 days, town and precinct 30 days; registration required; ballot reform; convicts, unless pardoned, excluded. Women vote on school matters.

Legal Holidays.—January 1, February 12, February 22, May 30, July 4, first Monday in September, any day appointed by Governor or President for Fast or Thanksgiving, December 25. If Sunday, then Monday is holiday. Notes payable on Saturday.

Legal.—Statutes of limitation: Judgments, actions for recovery of land, written evidence of indebtedness, 10 years; unwritten contracts, personal actions, 5; redemption of tax sales, 2 years. Legal interest, 5 per cent; by contract, 7; usury forfeits entire interest.

Longitude West from Greenwich.
92°
90°
88
WISCONSIN
INDIANA
ILLINOIS.
SCALE OF STATUTE MILES.
0 10 20 30 40 50 60 70 80 90 100
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RAND, McNALLY, & CO., ENGR'S, CHICAGO.
DUBUQUE
ROCKFORD
FREEPORT
ELGIN
AURORA
CHICAGO
JOLIET
DAVENPORT
ROCK ISLAND
MUSCATINE
CLINTON
GALESBURG
BURLINGTON
Fort Madison
PEORIA
STREATOR
KANKAKEE
BLOOMINGTON
DANVILLE
KEOKUK
QUINCY
SPRINGFIELD
DECATUR
TERRE HAUTE
HANNIBAL
JACKSONVILLE
ST. LOUIS
EAST ST. LOUIS
BELLEVILLE
EVANSVILLE
OWENSBORO
PADUCAH
JEFFERSON CITY
MISSOURI RIVER
MISSISSIPPI RIVER
OHIO RIVER
Cedar Rapids
Iowa City
Davenport
Rock Island
Moline
Galesburg
Peoria
Springfield
Quincy
Decatur
Bloomington
Kankakee
Joliet
Aurora
Elgin
Rockford
Freeport
Dubuque
Chicago
Terre Haute
Evansville
Owensboro
Paducah
St. Louis
Belleville
Jacksonville
Hannibal
Keokuk
Burlington
Fort Madison
Jefferson City
Missouri River
Mississippi River
Ohio River
Illinois.

MICHIGAN. Mish'-e-gan. "Wolverine State."

Indian—signifies "Great Sea."

Historical.—Explored by Champlain 1615. Colonized by Jesuit missionaries under leadership of Marquette, at Sault Ste. Marie, 1668. French formed treaty of friendship with Indians and took formal possession of country 1671; ceded it to Great Britain 1763; British held territory after the Revolution until 1796. Detroit founded 1701. Michigan formed part of the Northwest Territory, organized 1787; became a part of Indiana Territory 1802; Michigan Territory formed 1805. Scene of active warfare during War of 1812-15; Detroit surrendered to British 1812; abandoned by them 1813. Michigan became a State, January 26, 1837—the twenty-sixth State to adopt the Federal Constitution. Present constitution adopted 1850.

Area.—Total area, 58,915 square miles; land, 36,819,000 acres, or 57,430 square miles; water, 1,485 square miles. Average width of Lower Peninsula, 200 miles; length north to south, 300. Upper Peninsula—area, 22,580 square miles; length east to west, 318 miles; width, 30 to 164 miles. Total number of counties in State, 85.

Physical Features.—State consists naturally of two peninsulas separated by Straits of Mackinac—width four miles—and surrounded in great part by Lakes Superior, Huron, and Michigan. Entire coast line, 1,600 miles. Surface of Upper Peninsula rugged and mountainous, especially in the west; eastern portion heavily timbered or covered with grasses, and interspersed with numerous lakes; the Tahquamenon, the largest river, enters Lake Superior from the east. Numerous streams in the west contain many falls and rapids, affording much valuable water-power. Menominee River largest and most important; Michigamme and Sturgeon next in importance. Highest elevation Porcupine Mountain, 2,023 feet. Surface of Lower Peninsula generally undulating; in the south and west are prairie lands; northern portion hilly; highest elevation 574 feet; lakes and streams abound; principal rivers, Muskegon, Grand, Kalamazoo, St. Joseph, and Saginaw; all furnish much valuable water-power, largely utilized. State has many natural lake harbors. Michigan includes a large number of islands, chief of which are Isle Royale and Grand Island in Lake Superior; Drummond and Sugar, Lake Huron, and the Manitou group, Lake Michigan. Throughout the islands, shores, and inland lakes are located many attractive and notable summer resorts.

Forests and Lumber.—Forests one of the most important sources of wealth. State leads all others in lumber industry; interests have chiefly centered in Lower Peninsula, which contained most extensive pine forests in the country, with large tracts of cedar and hardwoods. Four-fifths of entire area of Upper Peninsula heavily timbered. Pine and white cedar cut extensively. The large and valuable tracts of hardwoods practically untouched; spruce and white poplar furnish wood pulp for extensive paper manufactures, and some maple and birch are cut. Among the leading lumber centers of Lower Peninsula are Bay City, Saginaw, Muskegon, Manistee, and Traverse City; Upper Peninsula—Menominee, Escanaba, Manistique, St. Ignace, Ford River, and Munising. Estimated amount of standing timber in pine and hemlock 1896, 18 billion feet; white pine, 6 billion. Lumber production 1895, 2,731,029,535 feet; shingles, 1,360,535,500 feet. Other forest products produced in large quantities are tan-bark, bark extract, charcoal, and potash. Latest reports give value of lumber products $68,141,189; other products, $5,909,584.

Climate of Lower Peninsula greatly influenced by surrounding lakes; winters milder than in States in same latitude on west side of Lake Michigan. Climate of Northern Peninsula cold and rigorous, but more uniform than in Lower Peninsula, where sudden changes are not rare; atmosphere clear, bracing, and invigorating. Healthfulness of region attracts many visitors afflicted with bronchial and pulmonary diseases. Rainfall abundant and very evenly distributed throughout the year. Mean annual temperature: Detroit, 48.3 deg.; highest, 101 deg.; lowest, 24 deg. below; annual rainfall, 32.3 inches. Highest temperature: Marquette, 100 deg.; lowest, 27 deg. below; precipitation, 32.4 inches.

Agriculture the leading occupation in Lower Peninsula. In Upper Peninsula industry has received less attention, but number of farms and cultivated area are steadily increasing. Total number of farms in State, 1900, 158,783, total area, 13,945,852 acres; average number of acres in each farm, 87.83. Area of improved land, 9,533,700 acres; unimproved, 4,412,132 acres. All cereals yield abundantly in the Lower Peninsula, and, with the exception of corn, are grown successfully in Upper Peninsula. Root crops of superior quality are produced in large quantities. Michigan is especially famous for potatoes grown, particularly those from Lake Superior and Grand Traverse Bay regions. Culture of sugar beet has proven highly successful; second producing State. Area devoted to beet culture, 1900, 37,034 acres; yield, 205,925 tons; total value of beets grown, $902,592. In 1898, Michigan ranked fourth in production of winter wheat; second in number of potatoes. Other products, flax, hops, sorghum. Farm products, 1900: Wheat, 9,271,764 bushels, value $6,397,517; barley, 904,806 bushels, value $425,259; corn, 38,888,460 bushels, value $14,338,730; oats, 33,689,536 bushels, value $8,759,279; hay, 1,727,617 tons, value $16,325,951; potatoes, 15,630,941 bushels, value $4,324,025; rye, 1,041,068 bushels, value $499,713; beans, 1899, 1,558,833 bushels, value $2,338,527.

Horticulture one of the most profitable industries in the State. Soil and climate of the Lower Peninsula adapted to the cultivation of all orchard and garden fruits of the temperate zone. "Fruit Belt" comprises particularly the western counties bordering on Lake Michigan, where peaches are largely grown. Apples the most important crop; pears, plums, and cherries abundant; grapes flourish throughout the State. Berries yield large annual crops; constantly increasing areas devoted to the culture; strawberry ranks first; raspberry, red and black, and blackberry following. Cranberry acreage large, especially around St. Joseph. Market gardening, truck farming, commercial floriculture, and the nursery industry important and growing pursuits. In 1898 State ranked first in production of apples; product, 1900, 5,447,734 bushels. Area apple orchards, 1900, 196,361 acres; peach orchards, 48,938 acres. In the Upper Peninsula small fruits yield abundantly and tree fruits do well.

Live Stock.—Number and value of farm animals, June, 1900: Horses, 5 6,553, $35,903,537; sheep, 2,747,609, $7,162,664; milch cows, 563,905, $17,281,335; other cattle, 812.5 3, $19,333,451; swine, 1,165,200, $4,538,893; mules, 2,916, $153,475. Wool clip, washed and unwashed, 1901, 10,555,942 pounds; scoured, 5, 66,852 pounds.

Fisheries.—Commercial fisheries of Michigan among the most important in the country Industry employs 5,000 men; annual catch nearly 35,000,000 pounds. Whitefish and lake trout most valuable of food-fish taken; other important varieties found in the bordering lakes and inland waters are sturgeon, bass, pickerel, brook trout, and grayling. Latest reports give total catch for year 33,714,868 pounds, value $1,068,028; whitefish, 8,110,387 pounds, value $351,196; lake trout, 9,132,770 pounds, $375,202; herring, 7,822,900 pounds, $117,319; sturgeon, 831,606 pounds, $34,188. Fish culture, under management of State Fish Commission, has become an important enterprise. State has four hatching stations located at Detroit, Paris, Sault Ste. Marie, and Glenwood. Over 900 streams between Petoskey and Saginaw have been stocked with brook trout. Whitefish hatchery at Detroit most extensive in world. Up to 1898, Commission had distributed 935,885,314 fry of which 740,965,500 were whitefish.

Manufactures chiefly lumber, salt, furniture, agricultural implements, carriages, wagons, sash, doors, flour, etc.; shipbuilding an important factor in industries of State. 1900 reports give total value of manufactured articles as, $356,914,082. Lumber the most prominent of the manufacturing interests. Michigan, Wisconsin, and Minnesota produce over one-third the total output of the United States, Michigan production equaling that of Wisconsin and Minnesota combined. Furniture manufactories among the most extensive in the country. Manufacture of salt an important industry. First salt made in 1860; ranks next to New York, with 33 per cent of the total amount; output, 1900, 7,210,621 barrels, value $2,053,731. Output of pig iron, 1900, 163,712 tons; furnaces in blast, January, 1898, 5. Brick and tile manufactured, 1900, $1,147,378; common brick, $863,250; pressed, $48,411; vitrified paving brick, $60,000; drain tile, $114,747; pottery, $34,317; Portland cement. 775,000 barrels. Amount distilled spirits, 1897-8, 299,900 gallons; fermented liquor, 1901, 969,731 bbls. Number of silk factories, 1900, 2. In 1900 there were 9 beet sugar establishments, capitalized at over $4,000,000. Production, 33,703,283 pounds, value $1,600,284.

Minerals.—Michigan has an inexhaustible store of mineral wealth. Iron ores lead in importance, State excelling all

MICHIGAN.
(SOUTHERN PENINSULA.)
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50
Copyright, 1899, by Rand, McNally & Co.
Longitude West from Greenwich.
LAKE HURON
LAKE ERIE
LAKE ST. CLAIR
MICHIGAN
ONTARIO
SAGINAW BAY
GRAND TRAVERSE BAY
LITTLE TRAVERSE BAY
GREEN BAY
Straits of Mackinac
Mackinaw Island
Bois Blanc Island
Pt. St. Ignace
St. Ignace
Pt. Detour
Vans Harbor
Fayette
Beaver Island
Cross Village
Harbor Springs
Petoskey
Bay View
Charlevoix
Boyne City
Bear Lake
Wolverine
Gaylord
Atlanta
Hillman
Alpena
Thunder Bay River
Thunder Bay
Ossineke
Black River
Alcona
Harrisville
Greenbush
Mikado
Glennie
Au Sable
Oscoda
Tawas City
East Tawas
Alabaster
Port Austin
Port Crescent
Grind Stone City
Port Hope
Sand Beach
Forestville
Deckerville
Carsonville
Applegate
Croswell
Lexington
Port Huron
Marine City
Algonac
St. Clair
Mt. Clemens
Romeo
Lenox
Richmond
Armada
Yale
Peck
Brown City
Sandusky
Lapeer
Imlay City
Lum
Metamora
Oxford
Orion
Rochester
Pontiac
Birmingham
Royal Oak
Detroit
Dearborn
Wayne
Plymouth
Northville
Salem
Ann Arbor
Ypsilanti
Saline
Milan
Tecumseh
Adrian
Blissfield
Riga
Monroe
Erie
Pt. Pelee I.
Sea Gull Park
Leamington
Wheatley
Kingsville
Windsor
Sandwich
Amherstburg
Grosse Isle
Wyandotte
Trenton
Gibraltar
Flat Rock
Newport
Dundee
Ida
Raisinville
Petersburg
Deerfield
Clayton
Hudson
Cambria
Frontier
Camden
Waldron
Litchfield
Somerset Cen.
Jerome
Hillsdale
Reading
Quincy
Coldwater
Bronson
Burr Oak
Sturgis
Montgomery
Union
Constantine
Centreville
Three Rivers
Mendon
Sherman
Colon
Burr Oak
Edwardsburg
Cassopolis
Vandalia
Niles
Buchanan
Berrien Springs
Bridgman
St. Joseph
Benton Harbor
Stevensville
South Haven
Paw Paw
Paw Paw Lake
Coloma
Watervliet
Hartford
Decatur
Marcellus
Dowagiac
Wakeshma
Pokagon
Edwardsburg
Cassopolis
Vandalia
Niles
Buchanan
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Decatur
Marcellus
Dowagiac
Wakeshma
Pokagon
Kalamazoo
Battle Creek
Marshall
Albion
Concord
Jackson
Napoleon
Horton
Hanover
Homer
Litchfield
Somerset Cen.
Jerome
Hillsdale
Reading
Quincy
Coldwater
Bronson
Burr Oak
Sturgis
Montgomery
Union
Constantine
Centreville
Three Rivers
Mendon
Sherman
Colon
Burr Oak
Edwardsburg
Cassopolis
Vandalia
Niles
Buchanan
Berrien Springs
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Watervliet
Hartford
Decatur
Marcellus
Dowagiac
Wakeshma
Pokagon
Grand Rapids
Grand Haven
Muskegon
Pt. Sherman
Ferrysburg
Whitehall
Montague
Newaygo
Big Rapids
N.

others in production. Iron country consists of three well-defined districts—Marquette, Menominee, and Gogebic ranges; deposits lie in western half of Northern Peninsula, ranges trending nearly east and west. First shipments of iron ore made in 1856. Total output of iron ore, 1895, 5,812,444 tons; 1900, 9,926,727 tons, or 36.03 per cent of total product of United States. Of this amount nearly 97 per cent was red hematite ore, 1.7 per cent was magnetite, and 1.3 per cent was brown hematite. Copper mines in State next in importance to the iron. Mineral or Copper range extends from Keweenaw Point, Northern Peninsula, southwesterly parallel with Lake Superior. District contains some of the richest copper mines in the world; Lake Superior ores, unexcelled in quality, command the highest prices in home and foreign markets. First mention of Lake Superior copper mines made by Legarde 1636. Attention first directed to Isle Royale 1640. First attempts at copper mining 1770-2. Lake Superior region first visited by Dr. Houghton 1830. Organization of companies and location of permits began in 1842. Lake Portage region explored 1846-7, became prominent 1860. Mining on Ontonagon range began in 1843; operations and output unimportant until 1847. In 1855 district yielded largest mass of native copper that has ever been discovered; weight of nugget over 563 tons; value over $500,000. Calumet and Hecla, the largest and richest copper mines in the world, discovered 1866. Up to 1898 Lake Superior copper mines produced 2,380,722,000 pounds of refined copper; the combined output of 1898 and 1899 was 305,892,041 pounds; 1900, 145,461,498; output excelled only by that of Montana. Coal area, 6,700 square miles; mines, 1897, 13; total product, 1900, 849,475 tons; value $1,259,683. Salt wells opened in Saginaw Valley 1859; first salt made 1860; nine counties now produce fine salt. In 1899, Michigan manufactured 5,206,510 barrels of salt, value $2,460,538. Gold first discovered 1881, near Ishpeming; regular mining begun 1882; 1900, 1,403 fine oz., value $29,000. Vein discovered at Michipicoten 1897. Silver frequently occurs with copper mined. Output of gypsum, 1900, 129,654 short tons, value $285,119.

Building Stones.—Large quantities of sandstone, unsurpassed for building purposes, are found along Lake Superior coast; in 1900 the value of sandstone quarried was $132,650. Beautiful serpentines are quarried near Marquette. Limestone, granite, mica, marble, glass sand, and asbestos deposits are found. Brick and tile clays exist throughout the State, and are largely utilized. Total value of limestone, $425,636; used for road-making, $62,815.

Population.—Total population, 1810, 4,762; 1840, 212,267; 1860, 749,113; 1890, 2,093,889; 1900, 2,420,982. Male, 1,248,905; female, 1,172,077; native, 1,879,329; foreign, 541,653; white, 2,398,563; colored, 22,419; Africans, 15,816; Chinese, 240; Japanese, 9; Indians, 6,354.

Cities.—*Detroit*, port of entry on Detroit River, largest city in the State, and an important railway center; has an extensive American and Canadian trade in grain, wool, copper, pork, etc. State capital 1837 to 1847; population, census of 1900, 285,704. *Grand Rapids*, at head of navigation on Grand River; second city in size; fine water-power, utilized largely in the manufacture of lumber, furniture, wagons, woodenware, etc.; population, 1900, 87,565. *Saginaw*, prominent railway center, with flourishing industries, most important, lumber and salt; population, 1900, 42,345. *Bay City*, an important lake port on Saginaw River near its mouth; most important industrial enterprises, lumber and salt; one of the six principal lumber centers of the Northwest; population, 1900, 27,628. *Jackson*, a flourishing city on Grand River; population, 25,180. *Muskegon*, on Muskegon River near Lake Michigan, has large trade by water and rail; chief export, lumber; population, 20,818. *Lansing*, capital, on Grand River; center of a fine agricultural region and has important manufacturing industries; population, 16,485. *Menominee* has large lumber and planing mills; population, 12,818. *Ishpeming*, in vicinity of extensive iron mines, one of chief centers of iron industry, has smelting works, foundries, etc.; population, 13,255. *Sault Ste. Marie*, at rapids of St. Mary River, near outlet of Lake Superior. Here is the famous Soo Canal and a great international bridge; Falls furnish magnificent water-power; principal manufactures, lumber and its products; population, 10,538. *Marquette*, on Lake Superior, has a good harbor and is the principal port for the great iron district; population, 10,058. *Escanaba*, on Green Bay, one of the largest ore shipping ports in the world; important trade in lumber and fish; population, 9,549.

Railways, Etc.—First railroad chartered 1832. Michigan Central completed, Detroit to Ypsilanti, 1838. Miles in operation, 1840, 59; 1860, 779; 1870, 1,633; 1880, 3,938; 1890, 7,108; July, 1900, 8,193.18. Sault Ste. Marie Canal, over 1 mile long, 100 feet wide, 21 feet deep, begun 1853; first used 1855; extensions were opened in 1881 and in 1895.

Education, Etc.—Public school enrollment, 1899, 661,940; private, 45,568; expenditure, $6,539,146; school age, 5-20; compulsory, 7-16; text-books furnished. Educational institutions include University of Michigan, Ann Arbor; Detroit College, at Detroit; Normal schools at Ypsilanti, Detroit, and Mt. Pleasant; Agricultural College near Lansing; Michigan Mining School, Houghton; Michigan School for the Blind, State Reform School, and Industrial School for Boys, Lansing; School for Deaf, Flint; State Industrial School for Girls, Adrian; School for Dependent Children, Coldwater.

Political.—State elections, biennial. State, congressional, and presidential elections, Tuesday after first Monday in November. Number of Senators, 32; Representatives, 100; term, 2 years; sessions biennial, first Wednesday in January; limit of session, none. Number of electoral votes, 14. Voters must be citizens or declared intention, residents of the State and county 6 months, district 20 days; registration required; ballot reform. Aliens who have not declared intention 6 months previous to election, Indians, and duelists excluded. Women vote on school matters.

Legal Holidays.—January 1, February 22, May 30, July 4, first Monday in September, Thanksgiving, December 25. When holiday falls on Sunday the following Monday is observed.

Legal.—Statutes of limitation: Judgments, 10 years; open accounts, 6; notes, 6; redemption of tax sales, 1 year. Legal interest rate, 6 per cent; by contract, 8.

Production of Iron Ores in United States in 1900.

	TONS.		TONS.
Michigan	9,926,727	Montana, Nevada, New Mexico, Utah, and Wyoming	132,277
Minnesota	9,834,399	Ohio	61,016
Alabama	2,759,247	Kentucky	52,920
Virginia and West Virginia	921,821	Missouri	41,366
Pennsylvania	877,684	Connecticut and Massachusetts	31,185
Wisconsin	746,105	Maryland	26,223
Tennessee	594,171	Texas	16,881
New York	441,485	Iowa	2,137
Colorado	407,084		
New Jersey	344,247		
Georgia and North Carolina	336,186	Total	27,553,161

World's Production of Iron Ore, 1895.

	TONS.		TONS.
United States	15,957,614	Sweden	1,904,662
Great Britain	12,615,414	Belgium	812,637
Germany and Luxemburg	12,349,600	Italy	183,371
Spain	5,514,339	Canada	91,783
France	3,679,767	Cuba and other countries	1,386,044
Russia	2,700,000		
Austria-Hungary	2,340,173	Total	59,035,404

Copper Production of Michigan for Ten Years.

	TONS.		TONS.
1891	50,992	1896	64,073
1892	51,999	1897	64,858
1893	50,270	1898	66,291
1894	51,031	1899	65,803
1895	57,737	1900	64,938

The World's Copper Production, 1900.

	TONS.		TONS.
United States	270,588	British America	10,346
Spain and Portugal	53,522	Peru	8,220
Japan	27,840	Russia	8,000
Chile	25,700	South Africa	6,720
Australia	22,500	All other countries	11,435
Mexico	22,050		
Germany	20,410	Total	487,331

MICHIGAN.
(NORTHERN PENINSULA)
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60 70
Copyright, 1904, by Rand, McNally & Co.
Longitude West from Greenwich.
LAKE SUPERIOR
LAKE MICHIGAN
LAKE HURON
WISCONSIN
ONTARIO
Port Arthur
Fort William
Pt. Magnet
Pte I.
PASSAGE I.
Blake Pt.
White Fish Lake
Pigeon
Grand Portage
Washington Harbor
ISLE ROYALE
Siscowit Bay
Otter I.
Michipicoten Harbor
Michipicoten Island
Cape Gargantua
Caribou I.
Manitou I.
La Belle
Ahoue
Tamarack Sta.
Lake Linden
Outer I.
Ontonagon
Ontonagon R.
Portage L.
Houghton
Hancock
Calumet
Mohawk
Copper Harbor
Delaware Mine
Central Mine
Copper Falls Mine
Allouez
Keweenaw Bay
Pine River Pt.
Big Bay Pt.
Lake Independence
Huron Bay
Pt. Marquette
Pt. Maintique
Chippewa R.
Grand Marais
Deer Park
Vermilion Pt.
White Fish Bay
I. Parisienne
Sault Ste. Marie
Sugar I.
St. Joseph I.
Drummond I.
Detour
Gros Cap
Ironwood
Bessemer
Wakefield
Marenisco
Wellington
Choate
Gogebic L.
Lac Vieux Desert
Star Lake
Minocqua
Phillips
Stella
Rhinelander
Prentice
Tomahawk
Spirit Falls
Parrish
Pratt Jc.
Post Lake
Laona
Monico
Drexel
Antigo
Athens
Abbottsford
Wausau
Merrimac
Floodwood
Balsam
Amasa
Republic
Iron Mt.
Quinnesec
Norway
Vulcan
Channing
Crystal Falls
Dunn
Mastodon
Metropolitan
Calumet
Mine
Ewing
Watson
Little Lake
Lathrop
Escanaba
Gladstone
Nahma
Garden
Garden I.
Hog I.
Little Harbor
St. James
Beaver I.
Summer I.
Washington I.
N. Fox I.
S. Fox I.
N. Manitou I.
S. Manitou I.
Green Bay
Menominee
Marinette
Peshtigo
Oconto
Charlevoix
Petoskey
Harbor Springs
Little Traverse Bay
Cheboygan
Mackinac I.
Straits of Mackinac
Bois Blanc I.
Point Aux Pins
Mullets Lake
Black Lake
Cheboygan R.
Onaway
Cross Village
Northport
Leland
Grand Traverse Bay
Traverse City
Elk Rapids
Alba
Gaylord
Thunder Bay
Alpena
Thunder Bay R.
Thompson
Manistique
Manistique R.
Manistique Lake
Germfask
Creighton
Rapid River
Trout Lake
Ozark
Pickford
Palms
Gatesville
Raber
Strongville
Hessel
Allenville
Manistique
Lake Michigamme
Interior
Beacon
Erie Mine
Atkinson
Crystal Falls
Dunn
Mastodon
Channing
Watson
Metropolitan
Calumet
Mine
Ewing

WISCONSIN. Wis-kŏn'-sin. "Badger State."

Indian—"Wild Rushing Channel."

Historical.—Earliest explorations made by French, 1634. Jesuit missions founded at La Pointe, 1665; Green Bay, 1669. First settlers located on present site of Prairie du Chien, 1726; trading post established at Milwaukee, 1785; city founded, 1835. Portage City founded, 1793. Lead regions discovered by Le Sueur, 1700; developed, 1822-32. Region included in Northwest Territory, 1787, and afterward in Indian Territory; became part of Illinois Territory, 1809; Michigan Territory, 1818. Wisconsin Territory organized April 20, 1836. Admitted into the Union, May 29, 1848. Seventeenth State to enter the Union; last formed out of the old Northwest Territory.

Area.—Total area, 56,040 square miles; land, 54,450; water, 1,590; extreme length, north to south, 300 miles; east to west, 250. Counties, 70. Reserved land, 365,353 acres.

Physical Features.—Surface an elevated rolling plain of woodland and prairie, sloping generally to the south and east. Elevation of State ranges from 610 feet to about 1,800. Shore line on Lakes Superior and Michigan, over 500 miles. Wisconsin remarkable for number of interior lakes; eastern and western portions of State contain 2,000. Many of them are noted summer resorts. Mississippi River forms the southwestern boundary for 250 miles; Fox, Wisconsin, and Chippewa rivers furnish extensive and valuable water power.

Climate.—Winters long and somewhat severe; severity tempered, however, by the healthful character of the dry, stimulating atmosphere. Summers warm. Mean summer temperature varies from 70 deg. in south to about 60 deg. in north; winter, 25 deg. in south to 15 deg. in north. Average annual rainfall about 30 inches. At Milwaukee, 32.1 inches; mean annual temperature, 45.2 deg.; highest, 100 deg.; lowest, 25 deg. below.

Agriculture,—State well adapted to the growing of cereals; third in oats, rye, and potatoes, fourth in barley. Cereals, 1900: Corn, 49,547,240 bushels; wheat crop, 13,166,599 bushels; barley crop, 6,259,179 bushels; oats, 61,971,552 bushels. Excellent tobacco, hops, and flax, and large crops of hay and potatoes are grown. Area under grass, 1900, 1,059,438 acres; hay produced, 1,218,354 tons; potatoes, 151,647 acres, 15,619,641 bushels; flax, 1898, 22,000 acres, 330,000 bushels; tobacco, 1896, 5,089,000 pounds, value $279,840. Rye, 1900, 3,010,437 bushels.

Horticulture.—Latest reports give production of apples, 1,670,845 bushels, value $638,565; grapes, 541,735 pounds, value $29,951; berries, 70,768 bushels, value $179,464; maple sugar, 166,803 pounds; maple molasses, 37,014 gallons. Number of nurseries, 117; acreage, 1,651; capital invested, $492,277. Seed farms, 21; acreage, 2,919; capital, $180,878.

Live Stock and Dairy.—Stock-farming is a leading and profitable pursuit. Number and value of farm animals, 1900: Horses, 555,756, value $34,316,475; mules, 4,490, $243,495; sheep, 1,675,453, $4,510,350; milch cows, 998,397, $29,642,522; other cattle, 1,315,708, $17,206,895; swine, 2,014,631, $7,580,423. Wool clip, 1901, 4,712,500 pounds. Dairying an important industry; second in list of cheese-producing States and second in number of creameries. Value of dairy products, 1900, $32,900,000: number of creameries, 1,000; cheese factories, 1,800.

Fisheries.—Inland lakes and streams contain numerous varieties of excellent fish. Wisconsin Fish Commission, established 1874, annually stocks the waters with trout, whitefish, pike, and carp. Hatcheries located at Madison, Milwaukee, and Bayfield. Wall-eyed pike the most valuable. Number pounds whitefish, lake trout, herring, blue fins, etc., taken in Lake Michigan, 1896, 9,953,000; in Lake Superior, 7,880,200; Green Bay, 26,328,000. Total pounds taken in Wisconsin waters, 46,361,200, value, $1,015,595.

Manufactures.—Chief manufacturing cities are Milwaukee, Superior, La Crosse, Oshkosh, and Racine. Principal products, lumber, flour and feed, machine shop and foundry products, beer and malt liquors, wagons and carriages, packed meats, and leather. Number of manufacturing establishments in 1900 was 16,187, capital, $330,588,779; value of products, $360,818,942; employés, 152,836; wages paid, $70,000,000. State ranks third in manufacture of flour; fourth in output of fermented liquor. Pig iron manufactured, 1900, 184,794 tons. Coke, 48,000 short tons, value $240,000. Value of brick and tile, $1,072,179; pottery, $293,895; lime, $442,586. Fermented liquor, 1900-01, 3,240,714 barrels; distilled spirits, 2,426,613 gallons. In 1900, flouring mills yielded an output valued at $26,327,942; value lumber and timber products, $57,634,816; tanneries, value $20,074,373; malt liquors, value $19,394,709; dairy manufactures, value $20,120,147; foundry and machine shop products, value $22,252,730; meat packing, $13,601,125; paper and wood pulp (ranks fifth), $10,895,576; planing mills, value $8,400,695, iron and steel, value $8,905,226; furniture, value $8,721,823; agricultural implements, value $7,886,363; railway shop construction, value $6,956,341; carriages, wagons, etc., value $6,306,823.

Lumber.—Lumbering next to agriculture the leading industry. Latest reports give nearly 900 establishments engaged in the industry, with an output of about 3,000,000,000 feet of lumber. Area of standing timber, 1895, 2,509,747 acres. Value of output of wood-working establishments, 1894: Lumber, shingles, laths, etc., $34,437,000; articles of wood, $19,234,000; wagons, carriages, etc., $5,300,000. Output of hardwood lumber, 1897, 275,000,000 feet; railway ties, construction and ship timber, 225,000,000.

Minerals.—Wisconsin ranks high among iron-producing States. Magnetic ores are found in the Menominee Region, while ores mined in the north are peculiarly well adapted for making Bessemer steel. In 1900 State ranked fourth in production of red hematite; all iron ores, 746,105 tons, $2,681,272. Lead, zinc, and copper are found; good building stone and excellent clay are abundant. Nearly one-half the counties produce limestone. Value of output, $989,685. Value of granite, $407,711; sandstone, $81,571. Metallic paint, 1896, 1,417 short tons, value $18,958.

Population, 1840, 30,945; 1870, 1,054,670; 1890, 1,686,880. Population, census of 1900, 2,069,042; the classification was: Male, 1,067,562; female, 1,001,480, native, 1,553,071; foreign, 515,971; white, 2,057,911; colored, 11,131; Africans, 2,542. Chinese, 212; Japanese, 5, Indians, 8,372.

Cities.—*Milwaukee*, largest city; prominent railway, manufacturing, and commercial center; has immense flour mills, numerous breweries, and pork packing establishments; population, 1900, 285,315. *Superior*, second city, prominent industrial and commercial center; chief manufactures, iron and steel; shipbuilding important industry; a leading port for shipments of iron ore, lumber, and grain; population, 31,091. *Racine*, on Lake Michigan, has a flourishing trade in grain; manufactures farm implements, etc.; population, 29,102. *La Crosse* has numerous manufactories and an important trade in lumber; population, 28,895. *Madison*, capital; well-known summer and health resort; seat of State University; population, 19,164. *Oshkosh*, on Lake Winnebago, at Mouth of Fox River; prominent lumber center; population, 28,284. *Sheboygan*, on Lake Michigan, has extensive manufactures, a large export trade in grain, and important dairy interests; population, 22,962.

Railways.—First railway in State, 20 miles in length, constructed 1850; number of miles in operation, 1855, 187; 1860, 905; 1870, 1,525; 1880, 3,155; 1890, 5,615. July, 1900, 6,496.52 miles.

Education.—In southern and central parts of the State, outside of cities, the district system is universal; in newer counties, township system common. Public school enrollment, 1899-00, 618,290, private, 52,658; expenditure, $5,493,370; school age, 4-20; compulsory school age, 7-13; text-books may be furnished. Public high schools, 231; private secondary schools, 23. University of Wisconsin, Madison, founded 1850. Public Normal Schools at Milwaukee, Oshkosh, Platteville, River Falls, Stevens Point, West Superior, and Whitewater. State Public School, Sparta.

Political.—Number of Senators, 33; Representatives, 100; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 12. Voters must be actual citizens or declared intention, residents of State and county 1 year, town and precinct 10 days; registration required; ballot reform.

Legal Holidays.—January 1, February 22, Arbor Day, May 30, July 4, first Monday in September, Thanksgiving, December 25, and general election.

Legal.—Statutes of limitation: Judgments, sealed instruments, 20 years; recovery real property, 10; unsealed contracts, 6; personal action, 2. Redemption of tax sale, 3 years. Legal interest, 6 per cent; by contract, 10.

WISCONSIN.
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60 70 80
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RAND, MC NALLY & CO., ENGR'S, CHICAGO.
Longitude West from Greenwich
92°
90°
88°
LAKE SUPERIOR
MICHIGAN
LAKE MICHIGAN
MINNESOTA
IOWA
ILLINOIS
DULUTH
SUPERIOR
ASHLAND
HURLEY
MADISON
MILWAUKEE
CHICAGO
LA CROSSE
DUBUQUE
WATERTOWN
OSHKOSH
FOND DU LAC
SHEBOYGAN
MANITOWOC
GREEN BAY
MENOMINEE
MARINETTE
RACINE
KENOSHA
WAUKEGAN
EVANSTON
JANESVILLE
BELOIT
BARABOO
PRAIRIE DU CHIEN
PLATTEVILLE
LANCASTER
DARLINGTON
MONROE
BARABOO
RICHLAND CENTER
BARRON
RICE LAKE
CHIPPEWA FALLS
EAU CLAIRE
MENOMONIE
HUDSON
STILLWATER
WAUSAU
MERRILL
ANTIGO
RHINELANDER
MARSHFIELD
STEVENS POINT
GRAND RAPIDS
WAUPACA
NEW LONDON
APPLETON
KAUKAUNA
BERLIN
RIPON
PORTAGE
BARABOO
WATERTOWN
JEFFERSON
WAUKESHA
WHITEWATER
DELAVAN
LAKE GENEVA
ELKHORN
BELOIT
JANESVILLE
EDGERTON
MONTICELLO
MONROE
NEW GLARUS
DARLINGTON
PLATTEVILLE
LANCASTER
PRAIRIE DU CHIEN
VIROQUA
LA CROSSE
WESTBY
ONALASKA
SPARTA
TOMAH
BLACK RIVER FALLS
OSSEO
ARCADIA
WHITEHALL
ARCADIA
DURAND
MENOMONIE
CHIPPEWA FALLS
BARRON
RICE LAKE
HAYWARD
HURLEY
IRONWOOD
ASHLAND
BAYFIELD
WASHBURN
SUPERIOR
DULUTH
ST. CROIX FALLS
HUDSON
STILLWATER
RIVER FALLS
PRESCOTT
ELLSWORTH
MENOMONIE
EAU CLAIRE
CHIPPEWA FALLS
BARRON
RICE LAKE
HAYWARD
HURLEY
IRONWOOD
ASHLAND
BAYFIELD
WASHBURN
SUPERIOR
DULUTH
ST. CROIX FALLS
HUDSON
STILLWATER
RIVER FALLS
PRESCOTT
ELLSWORTH
MENOMONIE
EAU CLAIRE
WAUSAU
MERRILL
ANTIGO
RHINELANDER
MARSHFIELD
STEVENS POINT
GRAND RAPIDS
WAUPACA
NEW LONDON
APPLETON
KAUKAUNA
BERLIN
RIPON
PORTAGE
BARABOO
WATERTOWN
JEFFERSON
WAUKESHA
WHITEWATER
DELAVAN
LAKE GENEVA
ELKHORN
BELOIT
JANESVILLE
EDGERTON
MONTICELLO
MONROE
NEW GLARUS
DARLINGTON
PLATTEVILLE
LANCASTER
PRAIRIE DU CHIEN
VIROQUA
LA CROSSE
WESTBY
ONALASKA
SPARTA
TOMAH
BLACK RIVER FALLS
OSSEO
ARCADIA
WHITEHALL
ARCADIA
DURAND
MENOMONI

MINNESOTA.

Min-ne-sō'ta. "Gopher" or "North Star" State.

Indian—"Minne Sotah," signifies "Cloudy Water."

Historical.—Section east of Mississippi River formed part of Northwest Territory, acquired 1783; section west of river part of Louisiana Purchase of 1803. Visited by French fur traders, 1659: explored by Hennepin, 1680; forts established on Lake Pepin, 1688 and 1727. Explorations made by Major Long, 1817 to 1823; Fort Snelling established, 1819. Minnesota Territory organized, with nearly twice its present area, March, 1849. Entered the Union under its present limits, May 11, 1858, thirty-second State. Scene of Indian massacres, 1861–5.

Area, 83,365 square miles; land, 79,205; water, 4,160; extreme length, north and south, 380 miles; breadth varies from 337 in north to 183 in center and 282 in south. Counties, 80. Unappropriated land, 4,696,203 acres; unsurveyed 2,309,908 acres.

Physical Features.—Surface in general an undulating plain; elevation varying from 1,680 feet on the Height of Land in the north to 660 feet at southern boundary; average elevation of State, 1,000 feet. Mississippi River rises in State, flows through or along border 797 miles; forms 134 miles of eastern boundary; navigable within the State, 540 miles. Red River of North constitutes 379 miles of western boundary; navigable 250 miles. Minnesota River most important tributary of Mississippi in State; length about 450 miles. Throughout the State are many lakes; estimated number 7,000; many are beautiful and have become popular summer resorts.

Climate extremely healthful; winters usually long and cold; severity markedly tempered by extreme dryness of the atmosphere; summers warm and comparatively moist. Mean annual rainfall at St. Paul, 27.5 inches; mean annual temperature, 43.6 deg.; highest, 100 deg.; lowest, 41 deg. below.

Agriculture the leading industry, two-thirds of State adapted to pursuit. Wheat occupies largest acreage; other cereals and root crops largely grown. About two-thirds of flaxseed produced in United States grown in vicinity of St. Paul, Duluth, and Minneapolis. Culture of sugar beet greatly encouraged; area devoted to industry 1898, 1,200 acres; estimated area for 1899, 5,500 acres. In 1900 State ranked second in wheat, third in barley, sixth in rye, seventh in oats. Area and yield of products 1900: Wheat crop, 51,509,251 bushels, value $32,450,829; buckwheat, 143,460 bushels, value $81,772; corn, 31,794,708 bu., value $9,220,465; oats, 41,907,046 bushels, value $10,057,691; potatoes, 8,636,058 bushels, value $2,590,817; barley crop, 7,275,251 bushels, value $2,764,595; hay, 1,423,344 tons, value $9,892,241; rye, 1,036,444 bushels, value $435,306.

Horticulture, Etc.—Fruit culture receiving increased attention; apples, plums, grapes, and small fruits do well. Chief grape-producing counties, Cottonwood, Hennepin, Houston, and Nicollet; apple counties, Freeborn, Goodhue, Houston, Olmsted, and Winona. Number of grape vines, 1893, 77,450; product, 283,839 pounds; total number of apple trees in State, 452,665; under bearing, 224,445; product, 185,270 bushels; number of stands of bees, 19,605; honey produced, 324,911 pounds.

Live Stock and Dairy interests important; annual receipts combined about equal those for cereals. Cattle, horses, sheep, and swine largely raised; southwestern sections particularly adapted to wool growing. Slaughtering and pork packing important industries. Number and value of farm animals June, 1900: Horses, 696,469, value $42,255,044; sheep, 589,878, $1,740,088; milch cows, 753,632, $21,513,337; other cattle, 1,118,693, $14,735,621; swine, 1,440,806, $5,865,590; mules, 8,339, $486,580. Wool clip, 1901, 2,679,978 pounds. Great progress made in dairying. In 1893, 201 creameries and 93 cheese factories produced 35,864,832 pounds of butter and 1,675,525 pounds of cheese; during 1898 there were 650 creameries, 600 cream stations, and 100 cheese factories in operation. Annual production of butter and cheese estimated at 50,000,000 pounds each.

Fisheries.—Among the interior States the commercial fisheries of Minnesota are next in importance to those of Illinois and Louisiana. Most extensive fisheries in Mississippi River and Lake of Woods; fisheries of St. Croix River, Big Stone, and many other lakes also important. Catch chiefly sturgeon, buffalo-fish, catfish, and pike. No reliable statistics to date. Men, 1894, 936; catch, 6,401,280 pounds, value $163,782. Lake sturgeon, 1,137,053 pounds, $34,322; buffalo-fish, 1,587,802 pounds, $31,228; wall-eyed pike, 651,850 pounds, $20,128; catfish, 747,274 pounds, $18,200; common whitefish, 413,119 pounds, $10,359; pike, 396,165 pounds, $10,042; shovel-nose sturgeon, 443,395 pounds, $8,868; sauger, 150,595 pounds, $6,250; suckers, 324,999 pounds, $6,031; black bass, 102,500 pounds, $4,061. Trout, whitefish, and herring are taken in Lake Superior.

Manufactures.—St. Paul, Minneapolis, and Duluth principal manufacturing centers; lumber and flour lead in importance; brewing and manufacture of agricultural machinery, furniture, wagons, etc., prominent industries. Utilization of flax fiber for manufacture of tow, twine, cordage, bagging, paper, etc., receiving attention. Beet sugar factory located at St. Louis Park, daily capacity, 350 tons of beets; amount of refined sugar produced, 1900, 1,947,200 pounds. Sorghum syrup made, 1893, 125,156 gallons; maple syrup, 10,351 gallons, maple sugar, 12,378 pounds. Output of pig iron, 1900, 184,794 tons; brick and tile manufactured was $1,103,302; pottery, $293,395. Total number of manufacturing establishments in State, 1900, 11,114; employés, 84,553. Distilled spirits, 1900, 1,568,269 gallons, fermented liquor, 1900-01, 738,325 barrels.

Lumber.—Minnesota a leading lumber State. Manufactured products, 1900, $43,585,161; over one-fourth produced in Minneapolis. The total value of such products in 1890 was $25,075,132. Reports of first, second, and fifth lumber districts 1894: Logs scaled, 9,633,230; lumber manufactured, 1,016,608,826 feet; shingles, 255,978,750; laths, 218,948,250. Area of natural forest in 23 counties, 10,889,000 acres. Estimated amount of coniferous wood suitable for lumber, 1895, 20 billion feet. Total amount of white pine, 1896, 14,424,000,000 feet; Norway pine, 3,412,475,000 feet. Annual cut of pine for each of three years, 1894–5–6, estimated at 1,500,000,000 feet; estimated annual consumption of merchantable hardwood lumber in Minnesota, 100,000,000 feet.

Minerals.—In 1900 State ranked second in production of iron ore; output, 9,834,399 long tons, or 35.70 per cent of entire product of United States; valuation $24,384,393, all red hematite, in which State ranks first with 43 per cent total. Copper found along Lake Superior; salt springs in Red River Valley; peat deposits throughout the State. Quarrying an important industry. In 1900 State ranked fourth in output of sandstone, value $267,000; limestone, $441,554; granite, $221,684; rock cement manufactured, 1896, 83,098 barrels, value $38,549.

Population.—Ranked thirty-sixth in 1850; twentieth in 1890; nineteenth in 1900. Total, 1850, 6,077; 1890, 1,301,826, 1900, 1,751,394: Male, 932,490; female, 818,904; native, 1,246,076, foreign, 505,318; white, 1,737,636; colored, 14,358; Africans, 4,959; Chinese, 166; Japanese, 51; Indians, 9,182.

Cities.—*Minneapolis*, on Mississippi River at Falls of St. Anthony, largest city in the State; has large lumber and flour mills, latter the most extensive in the world; population, 1900, 202,718. *St. Paul*, capital, second city in size; head of uninterrupted steam navigation on Mississippi River; extensive commercial and manufacturing interests; population, 163,065. *Duluth*, on Lake Superior, head of navigation on Great Lakes and prominent railway terminus; large grain trade and important shipbuilding interests; valuable deposits of iron, granite, and freestone near by; population, 52,969. *Winona*, on Mississippi River, has large trade in wheat; has flour and saw mills, foundries, etc.; population, 19,714. *Stillwater*, on St. Croix River, seat of State Penitentiary; population, 12,318.

Railways.—First railroad, St. Paul to St. Anthony—10 miles—completed July, 1862. Mileage, 1870, 1,092; 1880, 3,151; 1890, 5,545; June, 1896, 6,155.85; July, 1900, 6,942.57.

Education.—Public school enrollment, 1899-00, 506,770, total expenditure, $5,630,013; pupils in private schools, 20,073. School age, 5–21; compulsory, 8–16. Public high schools, 102. Educational institutions include: University of Minnesota, established 1869, Minneapolis; State public school, Owatonna, established 1885. Normal Schools at Winona, Mankato, St. Cloud, Moorhead, and St. Paul.

Political.—State elections biennial. State, congressional, and presidential elections, Tuesday after first Monday in November; number of Senators, 64; Representatives, 114; sessions biennial, in odd-numbered years; meets first Wednesday in January; limit of session, 90 days; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 9. Voters must be citizens or declared intention, residents of State 6 months, precinct 30 days; registration required; ballot reform. Idiots, insane, and convicts excluded. Women vote on school matters.

Legal Holidays.—January 1, February 12 and 22, Good Friday, May 30, Arbor Day, July 4, first Monday in September, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, 10 years; foreclosure of mortgage, real actions, 15; contracts, 6; redemption of tax sales, 3 years; legal interest rate, 7; by contract, 10.

MINNESOTA.
SCALE OF STATUTE MILES.
0 10 20 30 40 50 60 70 80
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Longitude West from Greenwich.
96°
94°
92°
MANITOBA
ONTARIO
LAKE OF THE WOODS
LAKE SUPERIOR
RED LAKE
N. E. CORNER OF MINNESOTA ON SAME SCALE.
Pike L.
Grand Marais
Lutsen
Redmyer
Cypress Lake
Seigandajah Lake
Grindstone Narrows
Snowbank Lake
Ogishke Lake
Robinson
Athens
Aitkin
Brainerd
Duluth
Superior
Minneapolis
St. Paul
Fairmont
Mankato
Winona
Rochester
Faribault
Northfield
Red Wing
Hastings
Stillwater
Anoka
Princeton
Milaca
Mora
Grantsburg
Taylors Falls
Chisago City
Lindstrom
Center City
Hinckley
Sandstone
Moose Lake
Willow River
Rutledge
Carlton
Cloquet
Floodwood
Virginia
Eveleth
Mountain Iron
Hibbing
Chisholm
Grand Rapids
Deer River
Bemidji
Cass Lake
Walker
Park Rapids
Detroit
Fergus Falls
Wadena
Staples
Little Falls
Brainerd
Crosby
Ironton
Pequot
Cuyuna
Aitkin
Willmar
Litchfield
Glencoe
Hutchinson
Winthrop
Gaylord
Arlington
Sibley
Le Sueur
Montgomery
Lonsdale
Northfield
Cannon Falls
Hastings
Red Wing
Wabasha
Lake City
Zumbrota
Pine City
Rush City
Harris
Cambridge
Isanti
Anoka
Elk River
Big Lake
Monticello
Buffalo
Delano
Watertown
Mayer
Waconia
Chaska
Carver
Shakopee
Jordan
Belle Plaine
Le Center
Elysian
Waterville
Janesville
Waseca
Owatonna
Blooming Prairie
Austin
Albert Lea
Lake Mills
Clear Lake
Mason City
Forest City
Northwood
Hanlontown
Kensett
Manly
Rockford
Nora Springs
Charles City
Osage
Stacyville
Lyle
Austin
Taopi
Spring Valley
Preston
Fountain
Harmony
Chatfield
Dover
Eyota
Stewartville
Dodge Center
Kasson
Mantorville
Pine Island
Zumbro Falls
Mazeppa
Wanamingo
Goodhue
Welch
Cannon Falls
Miesville
Randolph
Hampton
Farmington
Rosemount
Inver Grove
South St. Paul
West St. Paul
Mendota
Fort Snelling
Minnehaha
Hopkins
Excelsior
Wayzata
Long Lake
Orono
Minnetonka
Deephaven
Spring Park
Mound
Medina
Maple Plain
Delano
Howard Lake
Waverly
Watertown
Norwood
Young America
Cologne
Victoria
Carver
Chanhassen
Eden Prairie
Edina
Bloomington
Richfield
Minneapolis
St. Paul
White Bear
Mahtomedi
Stillwater
Oak Park
Scandia
Marine
Forest Lake
Wyoming
Chisago City
Lindstrom
Taylors Falls
St. Croix Falls
Osceola
Dresser
Somerset
Star Prairie
New Richmond
Hudson
River Falls
Prescott
Stillwater
Bayport
Lake Elmo
Afton
Hastings
Cottage Grove
Newport
St. Paul Park
Grey Cloud
Denmark
Point Douglas
Hudson
Willow River
Glenwood
Amery
Clayton
Milltown
Frederic
Luck
Grantsburg
Siren
Webster
Danbury
Shell Lake
Spooner
Hayward
Cumberland
Barron
Rice Lake
Ladysmith
Bruce
Weyerhaeuser
Chetek
Barron
Turtle Lake

IOWA. I'-o wah. "Hawkeye State."

Indian—From Algonquin *ajawa*, "Across" or "Beyond."

Historical.—Visited by Marquette and Joliet in 1673. First attempted settlement made near present site of Dubuque by French, 1788. Formed part of Louisiana purchase of 1803 and of Missouri Territory. First permanent settlements made at Dubuque, Fort Madison, and Burlington, 1833. Des Moines established 1843. Iowa Territory organized June, 1838. State admitted to the Union, December 28, 1846 Twenty-eighth State admitted after adoption of the Federal Constitution. State Constitution adopted 1846; present Constitution, 1857.

Area.—Total area, 56,025 square miles, or 35,856,000 acres; land, 55,475 square miles; water, 550; length east and west, 300 miles; breadth, 208; 99 counties.

Physical Features.—Iowa lies entirely within the Prairie Region of the Mississippi Valley; surface generally undulating; mean elevation, 925 feet; highest, near Spirit Lake, 1,694 feet; lowest, 444 feet. Mississippi and Missouri rivers form the eastern and western boundaries, both navigable. Principal interior rivers: Des Moines, draining 10,000 square miles, Iowa, and Little Sioux. Many of the streams provide good water power.

Climate.—Winters severe, with heavy snowfalls; summers short and hot. Dry, clear atmosphere modifies severity of seasons and renders climate unusually healthful. Rainfall abundant but not always evenly distributed. Mean annual rainfall at Des Moines, 33.1 inches; mean annual temperature, 49 deg.; highest, 104 deg.; lowest, 30 deg. below; average summer temperature, 70.5 deg.

Agriculture the main occupation of the people. Iowa one of the leading agricultural States. Soil and climate particularly adapted to the industry. Ranked first in 1900 in corn and hay, second in oats and barley, fifth in potatoes and rye, seventh in wheat. Number of acres under crop, 17,504,840; meadows, 1901, 2,691,550; pasture, 8,107,440. Crops, 1900: Corn, 305,859,948 bushels, value $82,582,186; wheat, 21,798,223 bushels, value $12,860,952; oats, 130,572,188 bushels, value $26,114,428; barley, 11,708,822 bushels, value $4,332,264; rye, 1,806,570 bushels, value $740,694; buckwheat, 148,800 bushels, value $95,232; potatoes, 14,004,576 bushels, value $5,181,693; hay, 5,006,470 tons, value $34,043,996—U. S. agricultural returns. State reports for 1900 give the production of flax as 1,222,980 bushels, value $1,834,470; sweet potatoes, value $275,000; timothy and clover seed, value $1,175,000; sorghum, value $275,000: corn fodder, value $9,500,000; pasturage, $30,000,000; straw and other forage, $4,000,000. Less than 1 per cent of soil unfit for cultivation.

Horticulture.—Apples grown in abundance, pears, grapes, and small fruits cultivated successfully. Value of orchard and vineyard products, 1899, $2,016,127; small fruits, $878,447. Area devoted to nurseries, 1899, 2,905 acres; value of trees and plants sold, $619,092. Number of bearing trees in State in 1900, with yield in 1899: Apple trees, 6,869,588, 3,129,862 bushels; pear trees, 104,046, 5,014 bushels; peach trees, 516,145, 6,481 bushels; plum trees, 1,302,217, 186,312 bushels; cherry trees, 791,327, 118,743 bushels; apricot trees, 6,809,378 bushels. Grapes, 740,390,000 pounds; raspberries, 112,632 bushels; blackberries, 61,440 bushels. Fruit culture is growing rapidly.

Live Stock interests of great importance and increasing annually in value. State leads in number of swine. Number and value of farm animals, June, 1900: Horses, 1,392,573, value $77,720,577; mules, 55,747, $3,586,761; sheep, 1,056,718, $3,956,142; milch cows, 1,423,648, $46,349,012; other cattle, 3,943,982, $96,116,890, swine, 9,723,791, $43,764,176; wool clip, 1901, 4,726,599 pounds.

Dairy and Poultry.—These pursuits rank among the most important in the State. The number of creameries in 1900 was 994; the amount of butter shipped, 85,380,154 pounds. Value of dairy product, factory output, was $15,846,077; capital employed was $3,459,017. Output from farms, 1899, 61,789,288 pounds, cheese, 306,428 pounds, value of poultry, $9,491,819; eggs, 99,621,920 dozen, value $10,016,707; honey, 2,539,784 pounds, $205,183; all milk produced, 535,872,240 gallons.

Fisheries.—Among interior States Iowa commercial fisheries occupy a prominent place. Industry especially important on the Mississippi River; catfish most valuable. Capital invested 1894, $46,710; total catch, 4,079,704 pounds, value $124,851; catfish, 985,983 pounds, 343,934; buffalo fish, 1,350,144 pounds, $33,209; drum, 704,714 pounds, $15,916; wall-eyed pike, 98,823 pounds, $6,117; carp, 203,377 pounds, $5,218; black bass, 37,635 pounds, $2,445; pearl shells, 143,000 pounds, $2,072; eels, 22,671 pounds, $1,612.

Manufactures.—Manufacturing industries important. Principal articles manufactured: Flour, packed meats, furniture, carriages, woolens, cooperage, pottery, leather goods, foundry and machine shop products. Number of establishments, 1900, 14,819; total value products manufactured, $164,617,877. Meat packing most important: value of product, $25,296,518; product of dairy factories, $15,846,077. Value of brick and tile manufactured, $2,254,662; pottery, $36,589; stoneware, $25,739. Fermented liquor, 1900-01, 259,336 barrels; distilled spirits, 321 gallons. Number of cigar factories having one account, 661, pounds of tobacco used for cigars, 1,601,363; number of cigars made, 90,976,313.

Minerals.—Coal and lead are the chief minerals, coal leading in importance. Fields underlie one-third of total area, chief mining regions extend across southern section of State. Number of coal mines operated, 1897, 360; product, 1900, 5,202,939 tons, value $7,155,341, number of employés, 11,608; average number days mines were active, 228. Lead district in northeastern part of State covers 700 square miles. Mines near Dubuque have been most productive, ores yielding 70 per cent of lead. Limestone quarried chiefly in eastern and southeastern parts of State; value of output, 1900, $586,410. Gypsum worked near Ft. Dodge. Iowa and Kansas, 160,620 tons, value $543,910. Total value of sandstone quarries, over $19,000. Sixth in value of total stone output; $605,473 in 1900.

Population.—Ranked twenty-ninth in 1840; twentieth, 1860; tenth, 1880 to 1900. Total population, 1900, 2,231,853; Male, 1,156,849; female, 1,075,004; native, 1,925,933; foreign, 305,920, white, 2,218,667; colored, 13,186; Africans, 12,693.

Cities.—*Des Moines*, capital and largest city; prominent railway and manufacturing center with an important trade; population, 1890, 50,093; 1900, 62,139. *Dubuque*, second city in size and oldest place in State; extensive commercial and manufacturing center in a lead mining district; population 1900, 36,297. *Davenport*, on Mississippi River, is a large distributing center with flourishing manufacturing industries; population, 35,254. *Sioux City*, on Missouri River, 88 miles northwest of Omaha, important railway, trading, and manufacturing center; population, 33,111. *Council Bluffs*, a flourishing city on Missouri River, is center of several trunk line railways; population, 25,802. *Cedar Rapids*, a city of rapid growth and with an extensive trade; population, 25,656. *Burlington*, on Mississippi River, is an important manufacturing and railway center in vicinity of coal fields; population, 23,201.

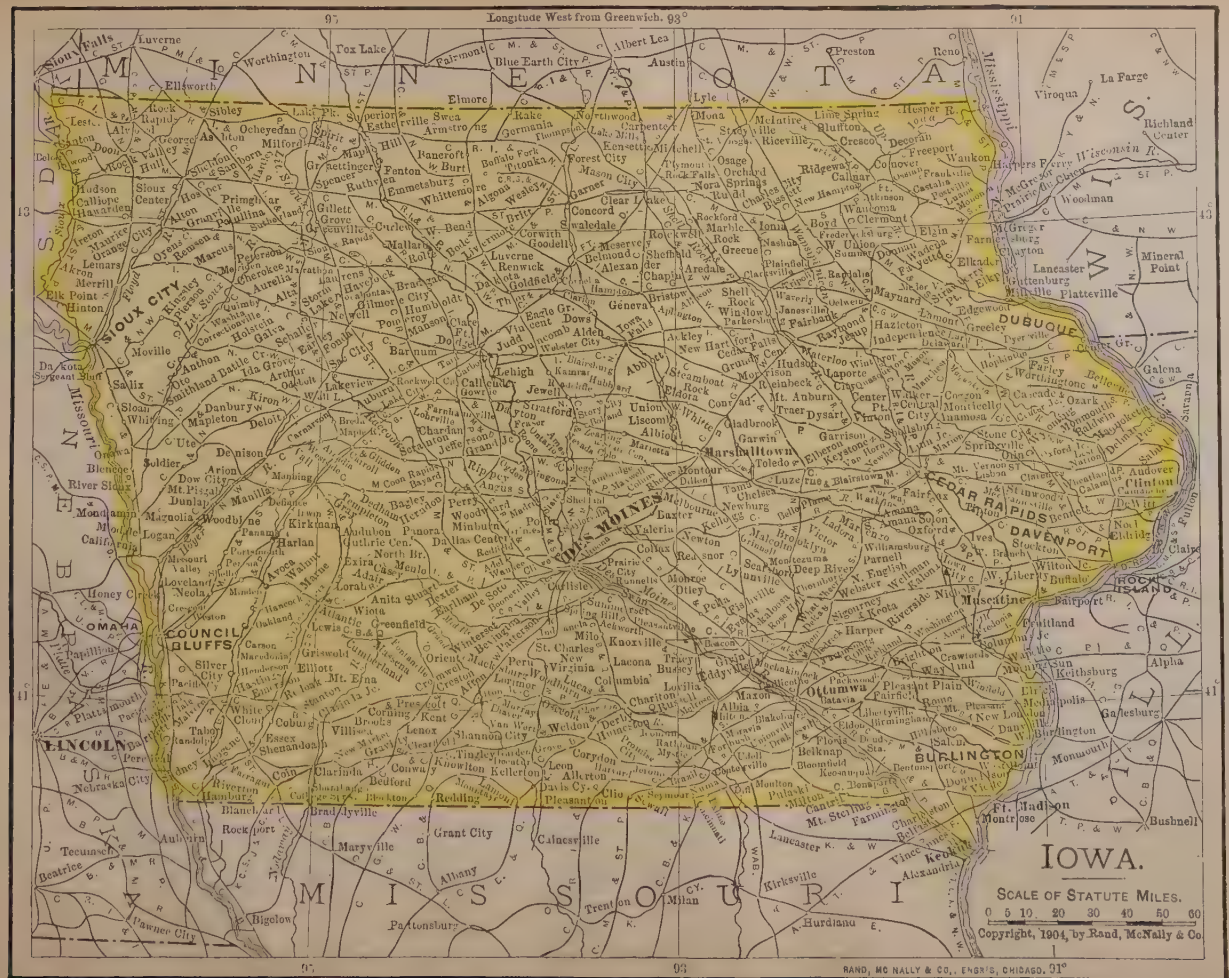
Railways.—In 1855 there were 68 miles of railroad; 1860, 655; 1865, 891; 1870, 2,683; 1875, 3,850; 1880, 5,400; 1885, 7,525; 1892, 8,506; July, 1900, 9,180.65.

Education.—Public school enrollment, 1899, 662,520; average attendance, 364,409; expenditure, $7,978,060; school age, 5-21. Public high schools, 344, private secondary schools, 35. Among educational institutions are: State University, Iowa City; Agricultural College at Ames; Iowa College, Grinnell; Cornell College, Mount Vernon; Drake University, Des Moines. Public Normal Schools at Boonesboro, Cedar Falls, Dexter, Hawarden, and Rockwell City.

Political.—State elections biennial; State, congressional, and presidential elections, Tuesday after first Monday in November. Number of Senators, 50; Representatives, 100; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 13. Voters must be actual citizens; residents of State 6 months, of county 60 days, town and precinct 10 days; registration required; ballot reform. Idiots, insane, and criminals excluded. Women vote on school matters.

Legal Holidays.—January 1, February 22, May 30, July 4, first Monday in September, general election days, Thanksgiving, December 25.

Legal.—Statutes of limitation: Unwritten contracts, open accounts, 5 years; written contracts, action to recover real estate, 10; judgments, 20; redemption from tax sale, 3 years. Legal interest, 8 per cent.


Longitude West from Greenwich. 93°
IOWA.
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60
Copyright, 1904, by Rand, McNally & Co.
RAND, MC NALLY & CO., ENGR'S, CHICAGO. 91°
MINNESOTA
SOUTH DAKOTA
NEBRASKA
MISSOURI
ILLINOIS
WISCONSIN
DES MOINES
SIOUX CITY
COUNCIL BLUFFS
DAVENPORT
CEDAR RAPIDS
DUBUQUE
BURLINGTON
OTTUMWA
MUSCATINE
CLINTON
LINCOLN
OMAHA

MISSOURI. Mis-soo'-ree.

Indian - signifies "Muddy."

Historical.—French settled at Fort Orleans (near Jefferson City) 1719; St. Genevieve founded by French 1755; St. Louis founded 1764; Ceded to Spain in 1763; retroceded to France 1800; formed part of Louisiana Purchase of 1803; included in Louisiana Territory 1805; Territory of Missouri organized 1812. Act enabling Missouri to enter the Union as a slave State—known as Missouri Compromise—approved June, 1821. Eleventh State in order of admission. Received present limits 1835. Constitutions adopted 1820, 1865; amended 1869 and 1875.

Area.—Total area, 69,415 square miles; or 43,796,000 acres, land, 68,735 square miles; water, 680; extreme length, north and south, 275 miles; average breadth, 245 miles; counties, 114.

Physical Features.—Missouri River principal natural feature; crosses the State in an easterly direction, dividing it into two sections. Surface of Northern Missouri broken and hilly, with many fine valleys. Southern Missouri crossed by Ozark Mountains; surface east of elevated region generally fertile lowlands, well timbered; west consists of prairie lands. Highest altitude, Cedar Gap, 1,675 feet. Principal rivers, Mississippi and Missouri, affording nearly 1,000 miles of navigable waterway; frontage on Mississippi, 500 miles.

Forests, etc.—State is well wooded, except in the northern and western sections. Oak, walnut, sycamore, hickory, locust, and pecan are found. Shipments of lumber, 1897, 365,320,523 feet; logs, 14,742,000; walnut logs, 3,168,000; piling, 13,986,000; cross ties, 4,053,686. State has 456,067 acres of Government land subject to entry, largely underlaid with minerals and covered with good timber; lands especially adapted to stock-raising and the growing of fruits, vegetables, and tobacco.

Climate in general mildly temperate and healthful; subject at times to extreme and rapid changes. Average temperature usually ranges colder in north than south. Summer temperature 75 deg. in northwest to 78.30 deg. in southeast; winter 28.30 deg. in northwest to 39.30 deg. in southeast. Mean annual rainfall at St. Louis, 41.1 inches; temperature, 56.1 deg.; highest, 106 deg.; lowest, 22 deg. below.

Agriculture.—Staple products: Cereals, tobacco, and fruit. Ranks fourth State in the country in production of corn. Other products: Sorghum, hay, potatoes, flax, and castor beans. Cotton raised in the southeast. Area and yield of farm products, 1900: Corn, 6,453,943 acres, 180,710,404 bushels; oats, 901,291 acres, 24,695,373 bushels, wheat crop, 1,507,737 acres, 18,846,713 bushels; hay, 2,145,748 acres, 2,768,015 tons, potatoes, 108,677 acres, 10,106,961 bushels; flax, 60,000 acres, 540,000 bushels; barley, 14,830 bushels; tobacco, 7,385,000 pounds; cotton, 64,200 acres, yield 17,526,600 pounds, 17,275 bales; rye, 9,607 acres, 134,498 bushels, value $21,519; buckwheat, 2,399 acres, 31,187 bushels, value $68,594. Shipments: 1898, flax, 34,512,810 pounds; cotton, 24,010,900 pounds, cotton-seed products, 15,844,000 pounds, castor beans, 1,114,055 pounds, hay, 2,919,435 bales.

Horticulture one of the most profitable pursuits in the State. Fruit farms in Southwestern Missouri important sources of wealth; apples and peaches grown extensively and large areas planted to young trees. Viticulture has been revived with notable results. In 1897 State ranked next to New York and Ohio in total production of fruit; in production of peaches ranked next to California. Estimated yield and value of orchard products, 1897: Apples, 9,000,000 barrels, value $12,000,000; peaches, 3,500,000 bushels, $3,500,000; pears, cherries, plums, and grapes, $1,500,000; berries, $2,500,000; total fruit crop, $20,000,000. Shipments: Apples, 2,029,339 bushels; peaches and plums, 139,237 baskets; strawberries, 394,823 crates; small fruit, 134,178 crates; dried fruits, 1,883,602 pounds; melons, 4,477,273; canned goods, fruit and vegetables, 8,466,621 pounds; honey, 65,215 pounds; nuts, 51,952 bushels; nursery stock, 2,329,942 pounds.

Live Stock.—Stock raising one of the most prominent industries of Missouri. Poultry farming a profitable and growing pursuit in southwestern section. Dairy farming a constantly increasing source of wealth. Number and value of farm animals June, 1900: Horses, 967,037, $42,094,814; mules, 283,519, $15,482,282; sheep, 1,087,213, $3,350,846; milch cows, 765,386, $23,514,794, other cattle, 2,213,248, $52,142,013, swine, 4,524,664, $16,533,935; wool clip, 1901, 3,933,154 pounds. Shipments, 1897: Dressed meats, 1,351,436 pounds; hides, 9,903,842; tallow, 2,481,994; butter, 3,378,272; cheese, 463,2[illegible]3; furs, 293,997; feathers, 487,300; poultry, 48,040,383, value $7,000,000; milk, 474,731 gallons; eggs, 34,314,133 dozen.

Fisheries.—Missouri is one of the foremost of the fishing States of the interior. The waters of the Missouri and Mississippi rivers afford the principal sources of supply. One-half the catch is represented by buffalo-fish; next in order of importance are catfish, crappie, drum, black bass, suckers, and paddlefish. Total catch for year, 3,321,654 pounds; value, $119,786; buffalo-fish, 1,724,078 pounds, value $41,354.

Manufactures are among the most extensive in the Union. St. Louis, chief seat of the industries. Greatest amount of capital invested in flouring mills, packing houses, breweries, manufactories of machinery, tobacco, boot and shoe, and clothing factories, car and printing works. Ranks first in manufacture of chewing and smoking tobacco; output, 78,487,505 pounds. Ranks sixth in production of fermented liquor. Pig iron product, 1900, with Colorado, 159,204 tons. Brick and tile, $3,665,093. Common brick, $1,057,497; pressed, $228,570; vitrified, $252,783; fancy $42,096; fire brick, $510,166. Pottery, $71,474. Shipments, 1897: Molasses, 124,266 gallons; wine, 2,005,791; cider and vinegar, 568,382, flour, 2,625,607 barrels; corn meal, 7,606,311 pounds; mill feed, 40,954,916. Oleomargarine, 1901, 3,996,325 pounds.

Minerals.—State is rich in mineral wealth; coal, lead, iron, and zinc are mined; quarries of limestone and sandstone are worked; glass sand, kaolin, and fire clay are plentiful. Deposits of onyx found in Ozarks. Gold has been discovered in St. Charles and Montgomery counties, pearls in Pomme de Terre and Osage rivers. Value of sandstone quarried, $53,401; granite, $139,103. Natural gas, $547. In 1900 State ranked third in production of zinc. The production of zinc in 1900 was 474,560,910 pounds, of lead, 59,023,910 pounds; value of two, $7,967,335. Lead and zinc mined in 21 counties. Coal area about 27,000 square miles, value of product, 1900, $4,280,328.

Population.—Ranked twenty-third in 1810 and 1820; thirteenth, 1850; fifth, 1870 to 1900. Total population, 1810, 20,845, 1850, 682,044; 1890, 2,679,184; 1900, 3,106,665: Male, 1,595,710; female, 1,510,955, native, 2,890,286; foreign, 216,379, white, 2,944,843; colored, 161,822, Africans, 161,234; Chinese, 449; Japanese, 9; Indians, 130.

Cities.—*St. Louis*, metropolis, financial, commercial, and manufacturing center of State and Mississippi Valley; fourth city of the Union. Population, 1900, 575,238. *Kansas City*, second city in size and commercial importance, has large wholesale trade and extensive meat-packing industry. Population, 163,752. *St. Joseph*, on Missouri River in northwestern part of State; important railroad and commercial center. Population, 1890, 52,324; 1900, 102,979. *Joplin*, enterprising city in center of zinc and lead mining district; population, 26,023; increase since 1890, 161.7 per cent. *Springfield*, principal city in Southwestern Missouri; population, 23,267. *Jefferson City*, capital, population, 9,664.

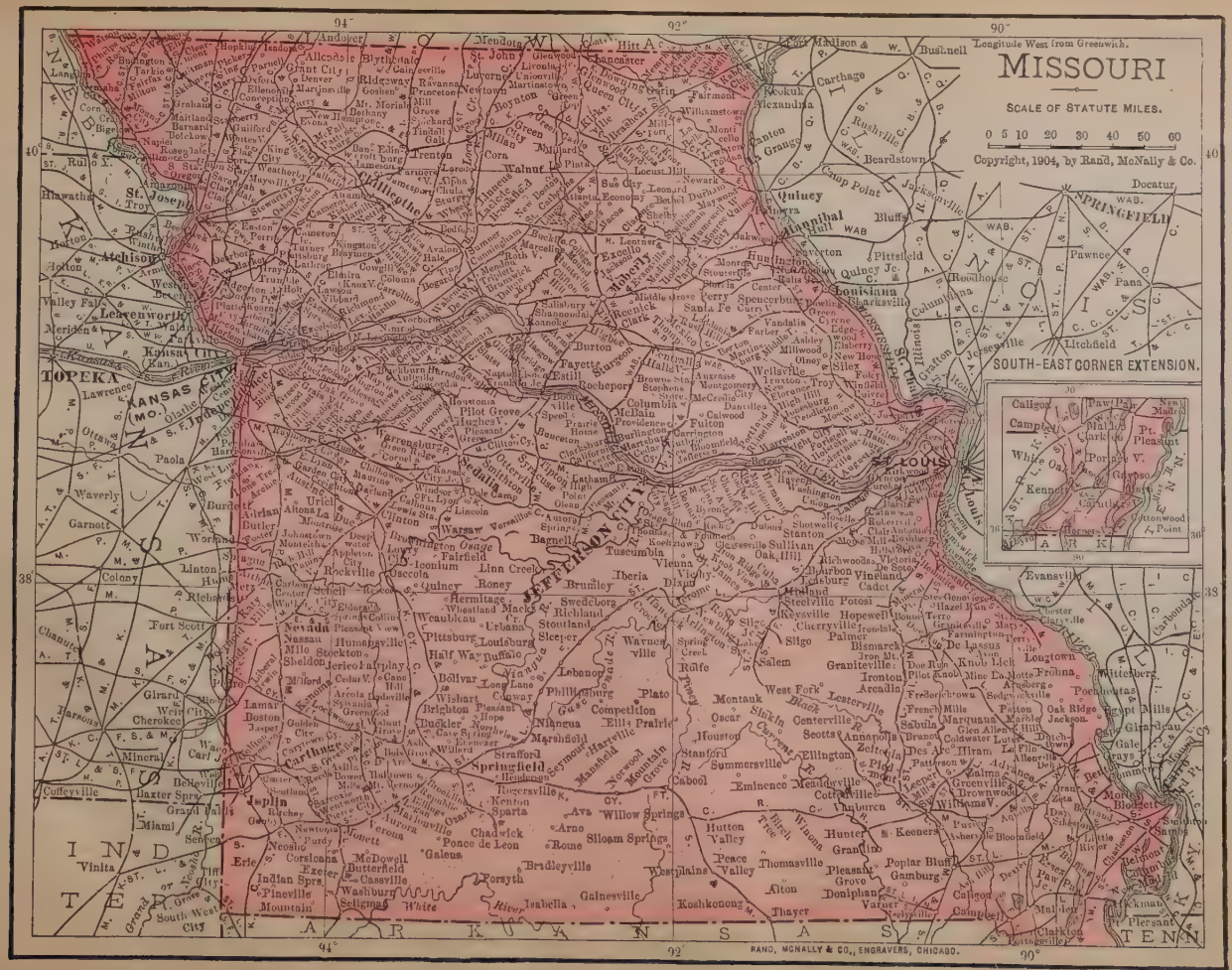
Railways.—First road operated in State, 1849 - Independence & Missouri—4 miles. Mileage, 1835, 139; 1860, 817; 1870, 2,000; 1880, 3,965; 1890, 6,142; June, 1896, 6,608.47; July, 1900, 6,867.80 miles.

Education.—Public school system adopted 1839; public school enrollment, 1899-00, 966,400; white, 910,980, colored, 55,420; private, 15,000, expenditure, $7,816,050, school age, 6-20; public high schools, 234. State University at Columbia founded 1840; Lincoln Institute, Jefferson City, for education of colored teachers. Normal Schools at Kirksville, Warrensburg, Cape Girardeau, Gainesville, and St. Louis.

Political.—State elections biennial. State, congressional, and presidential elections, Tuesday after first Monday in November; number of Senators, 34; Representatives, 140; sessions biennial, in odd-numbered years, meets first Wednesday in January; limit of sessions, 70 days; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 17. Voters must be citizens or declared intention; residents of State 1 year, county, town, and precinct 60 days; registration required in cities of 100,000 or over; ballot reform. United States soldiers, inmates of asylums, poorhouses, and prisons excluded.

Legal Holidays.—January 1, February 22, May 30, July 4, Labor Day, Thanksgiving, December 25, and any general or State election.

Legal.—Statutes of limitation: Judgments, actions on written evidence of debt, 10 years; contracts, 5; personal action, 2. Legal interest, 6 per cent; by contract, 8.


Longitude West from Greenwich.
MISSOURI
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60
Copyright, 1904, by Rand, McNally & Co.
SOUTH-EAST CORNER EXTENSION.
TOPEKA
KANSAS CITY
ST. LOUIS
JEFFERSON CITY
SPRINGFIELD
Springfield
Joplin
Carthage
Quincy
Hannibal
Louisiana
Litchfield
Pittsfield
Beardstown
Jacksonville
Carrollton
Alexandria
Madison
Bushnell
Carthage
Rushville
Canton
Grand Point
Meredosia
Versailles
Mendota
Hitt
Lancaster
St. John
Gleawood
Livonia
Lucerne
Martinsburg
Newtown
Boynton
Green
Fairmont
Williamstown
Monroe
Mill Grove
Richardson
Tindall
Gail
Trenton
Cora
Walnut
Pinta
Locust Hill
Newark
Bethel
Durham
Sac City
Leonard
Shelby
Atlanta
Economy
Clarence
Oakwood
Monroe City
Florida
Huntington
Stoutsville
Paris
Center
Perry
Spencerburg
Santa Fe
Curryville
Vandalia
Farber
Ashley
Millwood
Olney
Wellsville
Troy
Winfield
Foley
Elsberry
New Hope
Silex
Truxton
Pleasant Hill
Louisiana
Clarksville
Cirene
Lodge Wood
Bowling Green
Danville
Middletown
Auburn
Montgomery
Mexico
Calwood
Fulton
Millersburg
Harrington
Williamsburg
Jonesburg
Auxvasse
Stewartsville
Centralia
Sturgeon
Burton
Fayette
Estill
Rocheport
Columbia
McBain
Providence
Hallsville
Huntsdale
Prairie House
Boonville
Arrow Rock
Glasgow
Brunswick
Miami
Keytesville
Salisbury
Shannondale
Roanoke
Clark
Thompson
Marceline
Laclede
Browning
Linneus
Meadville
Bucklin
Brookfield
Dawn
Mooresville
Chillicothe
Utica
Wheeling
Avalon
Hale
Bogard
Dawn
Mooresville
Wheeling
Utica
Chillicothe
Trenton
Gallatin
Jamesport
Winston
Pattonsburg
Darlington
Maysville
Stewartsville
Cameron
Kingston
Lathrop
Turney
Plattsburg
Easton
Rushville
Agency
Amazonia
Savannah
Rosendale
Union Star
Oregon
Maryville
Graham
Maitland
Barnard
Burlington Jct.
Tarkio
Fairfax
Hilton
Corning
Craig
Big Lake
Napier

ARKANSAS. Ar'-kan-saw. "Bear State."

Arc, a bow—prefixed to Kansas.

Historical.—Originally a part of Louisiana Cession of 1803. Visited by De Soto, 1541; by Marquette, 1673. Settled by French, 1685; claimed by Spain, 1763–1800. Formed part of Louisiana Territory until 1812; of Missouri Territory until 1819, when Arkansas Territory, then including Indian Territory, was organized. Became a State with its present boundaries June 15, 1836; the twenty-fifth State to enter the Union. Scene of active military operations during Civil War; seceded May 6, 1861; re-admitted 1868; constitution revised 1874.

Area, 53,850 square miles; land, 53,045; water, 805; length, north to south, 240 miles; average breadth, 228 miles. Public lands subject to entry, 3,493,444 acres. Reserved land, 2,560 acres.

Physical Features.—Surface generally rolling; slopes gradually from swampy valley of Mississippi in east to hilly section in west, culminating in Ozark Mountains in northwest. Highest altitude, Mt. Magazine, 2,800 feet. Mississippi frontage on east, 300 to 400 miles. Arkansas River flows southeasterly through center of State, 700 miles, draining an area of 11,270 square miles; navigable 465 miles. White River drains 17,400 square miles, navigable 257 miles. Washita drains 11,800 square miles. State has about 3,000 miles of waterway navigable throughout the greater part of the year. Numerous mineral springs are found; the most famous are Hot Springs, in Garland County, temperature, 93 deg. to 168 deg.; elevation, 600 feet.

Forests.—A large part of the State is heavily wooded; estimated area of forest lands, 25,600,000 acres. Pine lands cover one-fourth the total area; forests largely untouched. Pine and oak the most abundant and useful woods; black walnut the most valuable; excellent cypress, largely used for shingles, found along swampy river bottoms; ash and yellow poplar abundant; sweet gum on bottom lands of southern section.

Climate temperate, and, throughout the highlands, healthful; lowlands subject to malaria. Extremes of heat and cold not great, yet sudden and considerable variations of temperature not uncommon. Southerly winds prevail. Rainfall abundant. Mean annual rainfall, Little Rock, 53.6 inches; mean annual temperature, 62.2 deg.; highest, 105 deg.; lowest, 5 deg. below.

Agriculture a leading industry; farm lands unexcelled; arable area, 28,490,980 acres; in farms, 16,636,719; chief productions, cotton, cereals, and tobacco. Cotton grown for shipment in southern and southeastern sections. Large area devoted to corn; estimated area adapted to its growth, 6,000,000 acres. Wheat successfully grown throughout the State; large proportion of crop produced in northern section; oats, barley, millet, sorghum, cowpeas, buckwheat, rice, broom corn, etc., grown. Market gardening profitable. Farm productions, 1900: Corn, 2,380,313 acres, 45,225,947 bushels, value $19,447,157; wheat, 266,279 acres, 2,689,418 bushels, $1,748,122; oats, 317,057 acres, 7,033,665 bushels, $2,463,533; rye, 1,715 acres, 19,722 bushels, $14,200; potatoes, 29,553 acres, 2,127,816 bushels, $1,212,855; hay, 140,233 acres, 228,580 tons, $2,022,933; cotton, 1899, 1,726,350 acres, 669,385 bales, $24,298,676; tobacco, 5,887 acres, 831,700 pounds, $85,395; cotton seed, 340,530 tons, value $3,382,368.

Horticulture.—Arkansas ranks high among the fruit States. Horticulture a prominent and growing pursuit. Area adapted to fruit culture, 25,000,000 acres. Fruits common to temperate zone successfully grown in all sections, cultivation extending rapidly. State especially famous for its apples; varieties grown in northwestern section unexcelled in quality and size. Peaches, pears, plums, grapes, melons, and berries flourish. Strawberries of fine flavor and unusual size grown extensively; large shipments made to Northern markets. Hillsides and valleys produce fine grapes. Viticulture a promising industry. Commercial vineyards show a steady and notable increase.

Live Stock.—During recent years improved breeds of cattle have been introduced. Excellent tame grasses are successfully grown, and much has been done to encourage the commercial manufacture of butter and cheese; several successful creameries have been established. Farm animals, June, 1900: Horses, 253,590, value $10,164,494; mules, 177,480, $10,212,889; sheep, 256,929, $437,317; milch cows, 312,577, $6,349,801; other cattle, 581,958, $5,535,826; hogs, 1,713,307, $2,981,339; wool clip, 1901, 717,234 pounds.

Fisheries.—Natural fishery advantages excellent; numerous large water courses, abounding in food-fishes. Waters of Arkansas and White rivers afford most extensive fishing. Buffalo-fish and other suckers constitute about half the catch; next in importance are catfish and drum. Total investment in fisheries, 1894, $36,564. Total catch, 3,875,858 pounds, value $116,011; black bass, 160,277 pounds, value $8,695; buffalo-fish, 1,626,290 pounds, $30,323; catfish, 904,562 pounds, $38,007; crappie, 158,073 pounds, $8,121; fresh-water drum, 579,642 pounds, $15,053; white bass, 64,690 pounds, $3,797.

Manufactures.—Chiefly lumber, cotton, and cotton-seed cake and oil. Leading Southern State in lumber, output equals that of many Northern States. Value of lumber output, 1890, $17,768,000. Lumber shipments, 1892, $20,000,000. Daily output of State sawmills, 5,000,000 feet of lumber. Total value of forest products, 1896, $20,000,000; pine products, $18,000,000. Other forest products annually turned out: Cedar posts and piling, 1,600,000 pieces; hickory, 1,000,000 feet; cypress shingles, 3,000,000,000; felloes and staves, 1,500,000,000; poplar, 8,500,000 feet; ash, 20,000,000 feet; spokes, 2,000,000. Lumber shipped, 1897, 33,070 carloads. Cut of yellow pine, first six months of 1898, 134,659,535 feet. Value of brick and tile made, 1896, $193,832. Distilled spirits, 1897–98, 49,768 gallons.

Minerals.—State especially rich in minerals. Coal area, 5,824,000 acres; large deposits of cannel coal in western and northwestern districts; undeveloped deposits of anthracite in Ozark and Kavanaugh mountains. Zinc is found; marble, limestone, granite, and other building stones cover vast areas; whetstone, ollstone, grindstone, and chalk deposits worked. Value of granite, 1900, $62,500. Acres containing iron, manganese, zinc, copper, antimony, and other ores, 7,124,000; containing ocher, clays, kaolin, gypsum, slate, etc., 3,150,000. Production of manganese, 145 long tons, value $1,530; value of limestone, $71,407. Total production of coal mines, 1900, 1,447,945 tons, value $1,653,618. Gold and silver recently found in paying quantities near Eureka; pearls found in Saline, St. Francis, and other rivers.

Population.—Total, 1820, 14,255; 1860, 435,450; 1890, 1,128,179; 1900, 1,311,564: Male, 675,312; female, 636,252; native, 1,297,275; foreign, 14,289; white, 944,580; colored, 366,984; African, 366,856; Chinese, 62; Indians, 66.

Cities.—*Little Rock*, on Arkansas River, capital, and most important railway and commercial center of State; has an extensive trade in cotton and manufactures of cotton-seed products. Population, census of 1900, 38,307. *Fort Smith*, on Arkansas River, in western part of State, second city; outlet for extensive coal mines; center of important fruit-growing district; population, 11,587. *Pine Bluff*, on Arkansas River, near Little Rock, has large trade in cotton; population, 11,496. *Hot Springs*, 60 miles southwest of Little Rock, famous health resort; noted for thermal springs; population, 9,973. *Eureka Springs*, well-known health resort, in a picturesque region of the Ozark Mountains, population, 3,572. *Helena*, on Mississippi River; population, 5,550.

Railways.—State tributary to the St. Louis system. Main line of Missouri Pacific runs diagonally through State. Miles in operation, 1860, 38; 1875, 740; 1885, 1,792; 1894, 2,343.91; July, 1900, 3,341.61 miles.

Education.—Enrollment in public schools, 1899-00, 468,020; white, 337,280; colored, 130,740; expenditure, $1,369,810; school age, 6-21. Public high schools, 61; private secondary schools, 21. Enrollment private schools, 1899-00, 7,808. Educational institutions include the University of Arkansas, at Fayetteville, organized in 1871, with an experimental farm of more than 200 acres, and Public Normal Schools at Paris and Pine Bluff.

Political.—State elections biennial, first Monday in September; congressional and presidential elections, Tuesday after first Monday in November; Senators, 32; Representatives, 100; term of Senators, 4 years; Representatives, 2 years; sessions biennial, in odd-numbered years; meets second Monday in January; limit, 60 days. Number electoral votes, 8. Voters must be actual citizens or declared intention, residents of State 1 year, county 6 months, of precinct 1 month; registration prohibited by constitution; ballot reform. Idiots, and convicts unless pardoned, excluded.

Legal Holidays.—January 1, February 22, July 4, Thanksgiving, December 25, and any day appointed for fast.

Legal.—Statutes of limitation: Judgments, 10 years; action for possession of real estate, 7; written instruments, 5; unwritten contracts, personal actions, 3. Redemption of tax sale, 2 years. Legal interest, 6 per cent; by contract, 10.

Longitude West from Greenwich.
94°
92°
90°
LITTLE ROCK
HOT SPRINGS
PINE BLUFF
MEMPHIS
ARKANSAS
TEXAS
MISSOURI
MISSISSIPPI
TENNESSEE
OKLAHOMA
INDIAN TERRITORY
SCALE OF STATUTE MILES
0 10 20 30 40 50
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LOUISIANA.

Loo-ee-ze-ah'-na.
"Creole State."

Named in honor of Louis XIV of France.

Historical.—Visited by De Soto, 1541; Marquette, 1673; La Salle, 1682; settled by French under Iberville and Bienville about 1700; first settlement in present State at New Orleans, 1718. Territory reverted to French crown 1732; ceded by France to Spain 1763; retroceded to France 1800; purchased by United States 1803; Territory of Orleans organized March, 1804; admitted to the Union April 30, 1812; fifth State admitted after formation of Government; seceded, 1861; New Orleans taken by Federals, 1862; State readmitted, 1868.

Area.—Total, area 48,720 square miles; land, 45,420; water, 3,300; extreme length east to west, 300 miles; breadth, 240. Counties, 59. Unsurveyed land, 65,018 acres; reserved, 1,474,834 acres.

Physical Features.—Surface chiefly a great plain sloping from north and northeast to Mississippi Delta. State naturally divided into two parts—the uplands and the alluvial and swamp regions of the coast. Delta occupies about one-third of total area. Coast Belt—marshy region—extends inland about 30 miles. Highest point in Claiborne Parish, 484 feet above sea level; average elevation, 75 feet. Mississippi River flows through and along border of State 600 miles. Total river navigation, 3,782 miles, Louisiana surpassing all other States, in extent of navigable waterways. Gulf coast line, 1,250 miles.

Forests.—Extensive areas throughout State densely wooded; estimated area, 16,000,000 acres. Of merchantable woods pine most important; lumber in great demand for shingles, car and bridge building. Swamp regions of Mississippi River contain large areas of valuable cypress. Along gulf coast are numerous groves of live oak, timber especially valuable for shipbuilding; several tracts reserved by United States for repair of navy. Other woods include gum, walnut, ash, hickory, and magnolia. Lumber is shipped to the Western States, Mexico, Central and South America.

Climate is semi-tropical; in the lowlands unhealthful. Summers long and hot; winters more severe than in corresponding latitudes on Atlantic Coast. Rainfall abundant everywhere; on the coast annually exceeds 60 inches; decreases toward interior, averaging 50 inches in northern section. Mean annual temperature at New Orleans, 69.2 deg.; highest, 99 deg.; lowest, 15 deg. above. Shreveport, winter, 45 deg.; extreme, 1 deg.; summer, 83 deg.; extreme, 107 deg. Average annual rainfall at New Orleans, 60.5 inches; Shreveport, 52.2 inches.

Agriculture the leading pursuit. Sugar, rice, cotton, and Indian corn the staple crops. Sugar cane first cultivated in United States near New Orleans, 1751. Louisiana foremost State in Union in production of sugar and rice; produces nearly all cane sugar and molasses of United States and more than one-half the total yield of rice. Area under sugar cane, 1899, 190,615 acres. Sweet potatoes an important crop; yield, 1895, 3,500,000 bushels. Tobacco of superior quality grown. Market-gardening a profitable pursuit; early vegetables in large quantities produced for Northern markets: increasing areas devoted to the industry. In 1900, 25,151 acres were devoted to hay; yield, 50,302 tons, value $472,839; potatoes, 7,709 acres, 539,630 bushels, $426,308; area under corn crop, 1,453,094 acres, yield 24,702,598 bushels, value $12,851,299; oats, 34,119 acres, 614,142 bushels, $245,657; cotton, 1,199, 1,179,156 acres, yield 699,476 bales, value $25,670,000.

Horticulture.—Fruits common to temperate regions grown in north. Oranges and figs lead in commercial importance; peaches and most other semi-tropical fruits cultivated successfully in south. Truck farmers produce large quantities of strawberries for market. Figs grown extensively for canneries; one of most valuable crops; yield of matured fig trees averages from 20 to 50 bushels each. Large areas being set to pecans; industry a promising one; nuts are of superior quality. Latest reports give upward of 60,000 bearing trees; yield, about 5,000,000 pounds.

Live Stock.—Louisiana especially adapted to raising live stock; has large areas of excellent pasturage well watered by numerous streams. Owing to mild winters, stock kept on range throughout the year. The value of farm animals in June, 1900, was placed at $27,757,301: Horses, 194,372, value $6,624,617; mules, 143,970, $10,636,982; sheep, 219,844, $373,040; milch cows, 184,815, $3,067,033; other cattle, 485,480, $4,973,963; swine, 788,425, $1,494,484. Wool clip, 1901, 422,484 pounds.

Fisheries.—The numerous water-courses of Louisiana abound in excellent food-fish. Commercial fishing in interior waters a prominent industry, Louisiana ranking second to Illinois. Annual yield of catfish nearly 5,000,000 pounds; next in importance are buffalo-fish, fresh-water drum, crappy, and black bass. Shrimp, terrapin, and turtles are abundant. Official reports give shrimp taken as 21,762 pounds; terrapin, 65,940 pounds; turtles, 50,855 pounds. Value of alligator hides secured, $23,334.

Manufactures during the past decade made a notable advance. Leading industrial establishments: Sugar refineries, rice and cotton-seed oil mills, and cotton, clothing, ice, and tobacco manufactories. Brick, lumber, rosin, and turpentine manufactured. New Orleans chief center of industries. State leads all others in production of raw sugar and molasses. First sugar mill established 1758. In 1900-01, about 616,000,000 pounds of sugar was made in Louisiana, and 43,120,000 gallons of molasses manufactured. Manufacture of ice, especially at New Orleans, important; in 1900, 179,716 tons, $563,561. Cigar manufactories consumed 787,271 pounds of tobacco, producing 56,093,391 cigars; number cigarettes, 48,249,800; smoking tobacco, 2,031,525 pounds. Distilled spirits, Louisiana and Mississippi, 1900-01, 848,549 gallons; fermented liquor, 220,604 barrels.

Minerals include sulphur, rock salt, iron ores, ocher, lignite, gypsum, and fertilizing marls. Deposits of sulphur in Calcasieu Parish, believed to be largest in country; estimated value varies from $30,000,000 to $100,000,000. Salt deposits on Petite Anse Island discovered 1791, rock salt produced excels in purity the famous Turk's Island or Mediterranean salt of commerce; output, 1895, 159,771 barrels, value $78,169.

Population.—Ranked eighteenth in 1810; twenty-fifth, 1890; twenty-third, 1900. Population, 1810, 76,556; 1890, 1,118,587; 1900, 1,381,625: Male, 694,733; female, 686,892; native, 1,328,722; foreign, 52,903; white, 729,612; colored, 652,013; African, 650,804; Chinese, 599; Japanese, 17; Indians, 593.

Cities.—*New Orleans*, largest city of the State, commercial metropolis of the Gulf States and principal seaport of Mississippi Valley. Leading cotton market of United States; has large export trade in sugar, molasses, rice, tobacco, etc.; population, 1900, 287,104. *Shreveport*, on the Red River, second city in State in commercial importance; has manufactures of lumber and cotton-seed oil; population, 16,013. *Baton Rouge* (red staff), capital, on Mississippi River, advancing rapidly in commercial importance; population, 11,269. *Alexandria*, a flourishing town in center of State; population, 5,648.

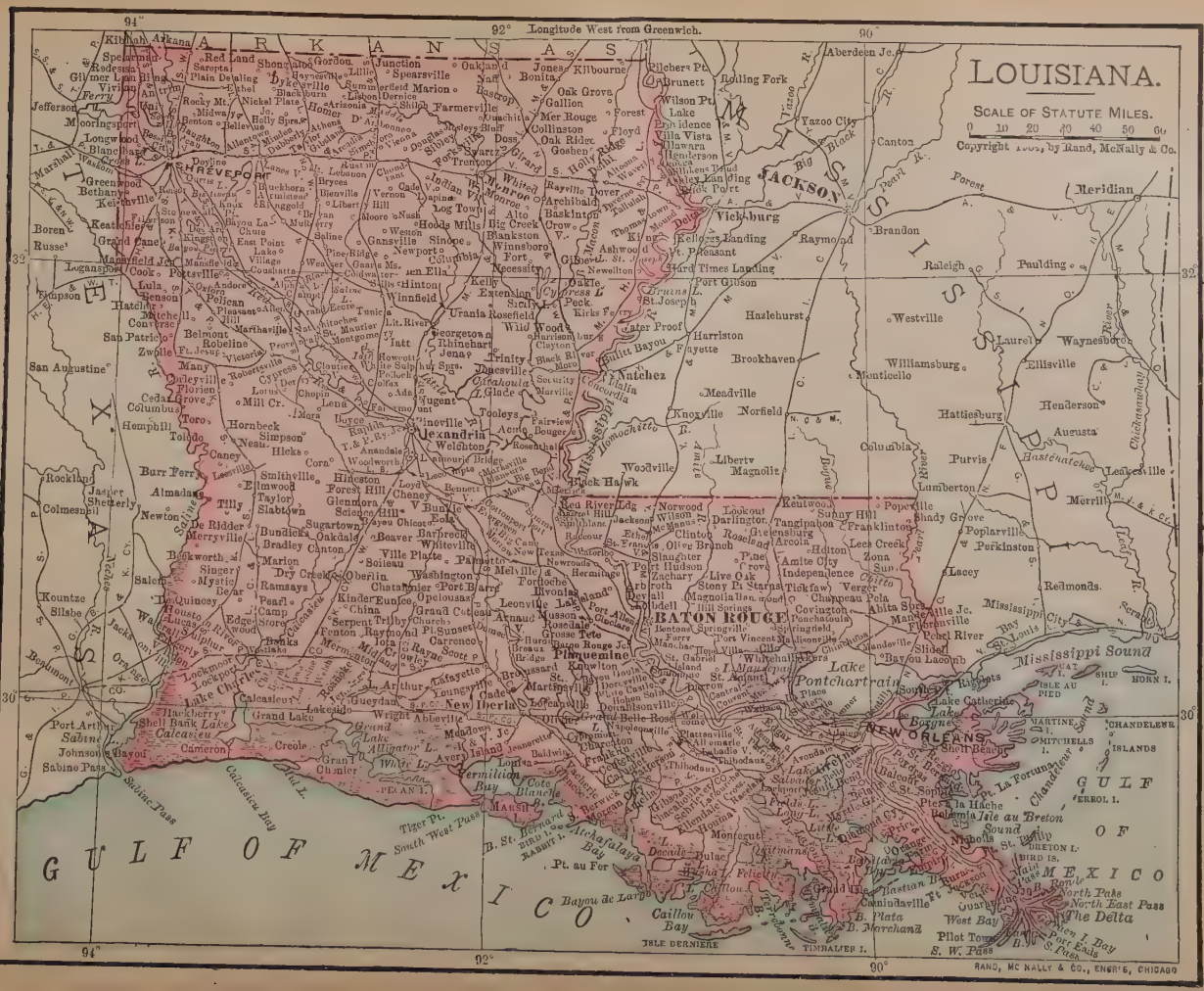
Railways.—Number of miles of railway in operation, 1835 and 1840, 40; 1850, 80; 1855, 203; 1860 and 1865, 335; 1870, 479; 1875, 539; 1880, 652; 1885, 1,370; 1890, 1,749; June, 1896, 2,236; July, 1900, 2,824.08 miles.

Education.—Public school enrollment, 1899-00, 470,350; white, 227,760; colored, 242,590; expenditure, $1,135,125; school age, 6-18. Public school buildings, 3,302, $1,066,000. Educational institutions include: State University and Agricultural and Mechanical College, Baton Rouge; Fiske Free and Public Library; Tulane University; Straight University (colored); and Sophie Newcomb College (for women, affiliated with Tulane), New Orleans; Normal Schools at Natchitoches and New Orleans.

Political.—State elections biennial, third Tuesday in April; congressional and presidential elections, Tuesday after first Monday in November; number of Senators, 39; Representatives, 114; term, 4 years. Sessions biennial, in even-numbered years; meets second Monday in May; limit of session, 60 days. Number of electoral votes, 8. Voters must be citizens or declared intentions; residents of State 1 year, of county 6 months, of precinct 30 days; registration required. Idiots, insane, and criminals excluded.

Legal Holidays.—January 1 and 8, February 22, Mardi-Gras, Good Friday, March 4, April 6, July 4, Thanksgiving, November 1 and 25, December 25.

Legal.—Statutes of limitation: Judgments, accounts acknowledged in writing, 10 years; open accounts, 3; promissory notes, 5; personal action, 1; redemption of tax sale, 1 year. Legal interest, 5 per cent; by contract, 8.


LOUISIANA.
SCALE OF STATUTE MILES.
0 10 20 30 40 50 60
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Longitude West from Greenwich.
94°
92°
90°
30°
32°
ARKANSAS
TEXAS
MISSISSIPPI
ALABAMA
GULF OF MEXICO
SHREVEPORT
JACKSON
BATON ROUGE
NEW ORLEANS
Vicksburg
Natchez
Meridian
Alexandria
Pineville
Lake Pontchartrain
Lake Borgne
Mississippi Sound
Chandeleur Sound
GULF OF MEXICO
Sabine Pass
Calcasieu Pass
Tiger Pt.
South West Pass
North East Pass
The Delta
Pass a Loutre
Bayou de Large
Caillou Bay
Isle Dernière
Timbalier I.
S. W. Pass
Pt. au Fer
Terrebonne
Lafourche
Plaquemine
Morgan City
Houma
Thibodaux
Donaldsonville
Gonzales
Sorrento
Port Allen
Baton Rouge Jc.
Port Hudson
Zachary
Clinton
Greensburg
Franklinton
Amite City
Independence
Tickfaw
Ponchatoula
Hammond
Covington
Abita Springs
Mandeville
Slidell
Bay St. Louis
Pearl River
Pass Christian
Biloxi
Gulfport
Shell Beach
Shell Bank
Isle au Pied
Horn I.
Mitchells I.
Chandeleur Islands
Errol I.
Breton I.
Bird Is.
Isle au Breton Sound
Lake Catherine
Lake Borgne
Bayou Lacombe
Bayou Sauvage
Bayou Terre aux Bœufs
Bayou Gentilly
Bayou St. John
Bayou Teche
Bayou Vermilion
Bayou Plaquemine
Bayou Lafourche
Bayou Boeuf
Bayou Rapides
Bayou Cocodrie
Bayou Black
Bayou Macon
Bayou Bartholomew
Bayou Des Glaises
Bayou Courtableau
Bayou Carencro
Bayou Nezpique
Bayou Mermentau
Bayou Queue de Tortue
Bayou Grand Caillou
Bayou Petit Caillou
Bayou Terrebonne
Bayou Chauvin
Bayou Des Allemands
Bayou Lacache
Bayou Barataria
Bayou Rigolets
Bayou Manchac
Bayou Sara
Bayou Pierre
Bayou Des Cannes
Bayou Des Glaises
Bayou Courtableau
Bayou Carencro
Bayou Nezpique
Bayou Mermentau
Bayou Queue de Tortue
Bayou Grand Caillou
Bayou Petit Caillou
Bayou Terrebonne
Bayou Chauvin
Bayou Des Allemands
Bayou Lacache
Bayou Barataria
Bayou Rigolets
Bayou Manchac
Bayou Sara
Bayou Pierre
Bayou Des Cannes
Red River
Ouachita R.
Black River
Tensas R.
Big Black R.
Yazoo R.
Pearl R.
Amite R.
Tangipahoa R.
Tchefuncte R.
Bogue Falaya
Bogue Chitto
Chickasawhay R.
Pascagoula R.
Escatawpa R.
Leaf R.
Red Land
Sarepta
Plain Dealing
Bellevue
Gilmer
Longwood
Greenwood
Bethany
Keatchie
Boren
Logansport
Hampton
Grand Cane
Mansfield
Cook
Lula
Benson
Hatchie
Mitchell
Converse
San Patricio
Belmont
Robeline
Zwolle
San Augustine
Many
Florien
Cedar Grove
Columbus
Hemphill
Toledo
Burr Ferry
Rockland
Jasper
Shelterly
Colmesneil
Almadan
Newton
Tilly
Slabtown
De Ridder
Merryville
Bundick
Oakdale
Bradley
Canton
Bucksworth
Singer
Mystic
Salen
Kountze
Silsbe
Deweyville
Orange
Bancroft
Lockport
Lake Charles
Hackberry
Port Arthur
Sabine
Johnson's Bayou
Cameron
Creole
Grand Lake
Calcasieu
Lake Arthur
Abbeville
Vermilion Bay
Marsh I.
Cote Blanche
Belle Rose
Lafourche
Thibodaux
Donaldsonville
Gonzales
Sorrento
Port Allen
Baton Rouge Jc.
Port Hudson
Zachary
Clinton
Greensburg
Franklinton
Amite City
Independence
Tickfaw
Ponchatoula
Hammond
Covington
Abita Springs
Mandeville
Slidell
Bay St. Louis
Pearl River
Pass Christian
Biloxi
Gulfport
Shell Beach
Shell Bank
Isle au Pied
Horn I.
Mitchells I.
Chandeleur Islands
Errol I.
Breton I.
Bird Is.
Isle au Breton Sound
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Bayou Sauvage
Bayou Terre aux Bœufs
Bayou Gentilly
Bayou St. John
Bayou Teche
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Bayou Plaquemine
Bayou Lafourche
Bayou Boeuf
Bayou Rapides
Bayou Cocodrie
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Tangipahoa R.
Tchefuncte R.
Bogue Falaya
Bogue Chitto
Chickasawhay R.
Pascagoula R.
Escatawpa R.
Leaf R.
Aberdeen Jc.
Rolling Fork
Yazoo City
Canton
Brandon
Raymond
Hazlehurst
Brookhaven
Meadville
Knoxville
Norfield
Woodville
Liberty
Magnolia
Port Gibson
Grand Gulf
Rodney
Natchez
Vidalia
Concordia
Tallulah
Delta
Lake Providence
Lake Bruin
Lake St. John
Lake Chicot
Lake Dick
Lake Bruin
Lake St. John
Lake Chicot
Lake Dick
Lake Providence

TEXAS. Tex'-as. "Lone Star State."

Indian, "Tachies"—signifies "friends."

Historical.—Upper Rio Grande visited by Spaniards, 1580–83; various Spanish missions established among the Indians, 1583–1794. First white settlement made by French under La Salle at Lavaca, 1685. Country formed part of the Spanish province of Mexico. Declared its independence of Spain and with Coahuila formed a state of Mexico, 1827. Seceded from Mexico, March 2, 1836. Battle of San Jacinto fought April 21, 1836. Independent republic 1836 to 1845, when it was annexed to the United States and admitted to the Union. The fifteenth State in order of admission. Seceded, February, 1861; re-admitted, 1870. Present Constitution adopted, 1876.

Area.—Largest State in the Union; total area, 265,780 square miles or 167,865,600 acres; land, 262,290 square miles; water, 3,490; extreme breadth, 825 miles; length, 740. Counties, 246.

Physical Features.—Surface slopes from northwest to southeast and is exceedingly varied. State comprises a mountainous region west of the Pecos River; high, treeless plains —including the Llano Estacado (Staked Plains)—of the northwest; a central hilly region; the prairie country; and the low coast region. Greatest altitude, Chanalis and Guadelupe Mountains, 7,500 to 9,000 feet. Coast line along Gulf of Mexico about 400 miles. Principal rivers, Rio Grande, Red, Sabine, Colorado, Trinity, Brazos, and Canadian.

Forests.—Eastern Texas a great timber belt. Its extensive forests of pine and oak an important source of wealth. Estimated forest area, 64,000 square miles. Among Southern States Texas ranks next to Arkansas in value of output of lumber and shingles. Shipments to foreign ports, 1896, 23,185,656 feet, value $262,911. Coastwise shipments, 8,368,072 feet. Yellow pine cut first six months, 1898, 129,338,635 feet.

Climate mild and healthful except occasionally in lowlands along the coast. Texas most healthful of the States bordering the Gulf. Summers long; continuous heat tempered by cool breezes from the Gulf. Winters genial; occasional "Northers" bring severe weather; cold of short duration; numerous winter health resorts due to delightful winter season. Coast, central, and eastern sections well watered; western section extremely dry. Mean annual rainfall at San Antonio, 29.7 inches; mean annual temperature, 68.8 deg.; highest, 108 deg.; lowest, 6 deg. above.

Agriculture the principal pursuit; cotton the leading crop Texas surpassing all other States in production. Other staples corn and wheat. Sugar cane cultivated successfully, plantations chiefly on Brazos River; area under culture, 1897-8, 5,000 acres. Tobacco-growing a profitable pursuit; special attention given to cigar leaf tobacco; acreage increased from 600 acres in 1897 to 4,000 acres in 1898. Area devoted to market-gardening in Pecos Valley and along the Gulf Coast increasing steadily; occupation important. Farm products: Cotton, 1899, 6,642,309 acres, 2,438,555 bales, value $92,187,133; corn, 1900, 81,962,910 bushels, value $38,522,568; wheat, 23,395,913 bushels, value $14,973,384; oats, 28,278,232 bushels, value $8,483,470; hay, 304,933 acres, yield 548,879 tons, value $3,732,377; potatoes, 14,789 acres, 916,918 bushels, value $806,888. Sugar cane, 1896, 15,506,547 pounds; bounty, $102,701.

Horticulture.—Excellent fruit and nuts grown in many localities. Texas peaches and pecans of superior quality; extensive shipments made to Northern markets. Apples grown in north, figs and oranges in south. Latest reports give area under peaches, 51,750 acres; value of crop, $1,289,551; apples, 11,428 acres, $289,856; melons, 16,243 acres, $576,082; area under pecans about 25,000 acres. Mustang and other native grapes abundant; European varieties flourish in northwest.

Live Stock.—Grazing as an industry second only to agriculture in importance. Owing to character of climate and vast extent of excellent pasturage, State peculiarly adapted to the pursuit. Western Texas abounds in nutritious grasses, affording pasturage for immense herds of cattle and flocks of sheep; horses in large numbers are reared also Texas foremost State in Union in cattle industry. Number and value of farm animals, June, 1900: Horses, 1,269,432, value $34,497,083; mules, 507,281, $25,121,619; stock cattle, 8,567,173, $143,233,577; milch cows, 861,023, $19,995,327; sheep, 1,889,298, $3,982,117; swine, 2,665,614, $7,605,687. Among wool-producing States Texas ranks high; clip, 1901, 15,061,634 pounds; scoured wool, 4,519,390 pounds.

Manufactures.—State has great natural advantages and abundance of raw material for manufactures. Numerous industries are receiving increased attention. In 1900 there were 12,289 manufactories in the State; value of material used, $67,102,769; products, $119,414,982; number of employés, 51,712. Cotton-seed oil and planing mills and saddle and harness works lead in importance; largest cotton-seed oil mills in country. Cotton mills have been opened, those at Galveston the most important. In 1898, sugar product was 15,680,000 pounds, value $627,200. Pig iron, 1900, 10,150 tons; Portland cement, 1896, 8,000 barrels, $24,000; brick and tile, 1900, $1,083,553, brick, $964,743; pressed, $36,605, pottery, $81,464. Distilled spirits, 1901, 10,382 gallons; fermented liquor, 385,443 barrels. First in value of artificial ice, 1900, 231,450 tons, $1,168,640.

Minerals.—Though largely undeveloped the mineral resources are among the richest in the country. There are extensive deposits of iron and coal. Large iron furnaces established at Rusk and New Birmingham. Coal output, 1900, 968,373 tons, value $1,581,914. Copper, lead, and silver ores are found most abundantly in trans-Pecos region; gold exists, also, and new discoveries have been made near Dallas. In 1900, 53 ounces were mined; value $1,100; silver, 447,400 ounces, value $295,988. Salt springs and lakes numerous; salt product, 1899, 312,436 barrels. Oil exists in large quantities; fields near Corsicana and Beaumont especially valuable. Sulphur and cinnabar are found. Gypsum deposits most important in country; value of output, 1899, $53,733 State ranks high in output of asphaltum, value two-thirds of whole. Building stones abound. Marble of various shades, granite, limestone, and sandstone are quarried.

Population.—Ranked twenty-fifth in 1850; seventh, 1890; sixth, 1900; total population, 1850, 212,592; 1890, 2,235,523; 1900, 3,048,710: Male, 1,578,900; female, 1,469,810; native, 2,869,353; foreign, 179,357; white, 2,426,669; colored, 622,041; Africans, 620,722; Chinese, 836; Japanese, 13; Indians, 470.

Cities.—*San Antonio*, metropolis of State and chief commercial center of Western Texas. Interesting historically; occupies site of Fort Alamo; is a great railroad center and largely controls trade of Southwestern Texas; population, 53,321. Houston, second city in size, population, 44,633. *Dallas*, important railroad and business center in Northern Texas; has numerous manufactures and a large trade; population, 1900, 42,638. *Galveston*, chief seaport, has an immense foreign and interior trade; especially notable for its cotton exports; population, 37,789. *Fort Worth*, live stock center; population, 26,688. *Austin*, capital, on the Colorado River, is a railroad center and seat of State University; population, 22,258.

Railways.—Number of miles in 1854, 32; 1860, 307; 1865, 465; 1870, 711; 1875, 1,635; 1880, 3,244; 1885, 6,370; 1890, 8,709; 1891, 8,854; 1895, 9,290.70. July, 1900, 9,873.39 miles, averaging 32.43 miles to each 10,000 inhabitants.

Education.—Public school enrollment, 1899-00, 1,070,000; expenditure, $4,469,014, school age, 8-17. Public high schools, 240; private secondary schools, 62. Educational institutions: University of Texas, organized 1883; Sam Houston Normal Institute for white teachers, Huntsville; Prairie View Normal Institute, near Hempstead, for colored teachers; Detroit Normal School, Detroit; Henry College; Baylor University, and others.

Political.—State elections biennial; State, congressional, and presidential elections, Tuesday after first Monday in January; number of Senators, 31; Representatives, 128; sessions biennial, in odd-numbered years; meets second Tuesday in January; no limit of session; term of Senators, 4 years; Representatives, 2 years. Electoral votes, 15. Voters must be citizens or declared intention; residents of State 1 year, of county and town 6 months; registration limited. Lunatics, idiots, paupers, convicts, and U. S. soldiers and seamen, in service, excluded.

Legal Holidays.—January 1, February 22, March 2, April 21, July 4, first Monday in September, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, 10 years; written contracts, 4; open accounts, 2; notes, 4; redemption of taxes, 2 years; extensions made when State is purchaser. Legal interest, 6 per cent; by contract, 10.

NEW MEXICO
OKLA.
INDIAN T.
ARK.
LA.
TEX.
GULF OF MEXICO
TEXAS.
AUSTIN
DALLAS
FORT WORTH
HOUSTON
GALVESTON
SAN ANTONIO
EL PASO
STAKED PLAIN
LLANO ESTACADO
Laguna Omitlan
Sulphur Draw
Monument
Lake
Pecos
Rio Grande
Rio Pecos
Rio Concho
Colorado
Brazos
Red River
Canadian
Trinity
Sabine
Neches
Nueces
Guadalupe
San Antonio
Matagorda Peninsula
Matagorda Island
Matagorda Bay
Aransas Bay
Corpus Christi Bay
Mustang I.
St. Joseph I.
Padre Island
Laguna Madre
Los Hermanos
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SCALE OF STATUTE MILES.
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THE PANHANDLE OF TEXAS,
ON SAME SCALE.
OKLAHOMA
NEW MEXICO
RAND, MCN. & CO., ENGRS., CHI. 94
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OKLAHOMA. Ŏk lah-hō′-mah.

Indian—signifying, "Beautiful Land."

Historical.—Oklahoma included in Louisiana purchase, 1803, and Texas acquisition, 1845; portion of a much larger area of public lands set apart for Indians by Congress in 1834. Five civilized tribes removed from their original homes as follows: Cherokee (from Georgia), Creek (Alabama and Georgia), Choctaw (Southern Alabama and Mississippi), and Chickasaw (Northern Alabama and Mississippi), 1833–1838; Seminole (Florida), 1846. Various small tribes of Reservation Indians were settled in extreme northeast of Territory. Large domain was originally known as Indian Territory. Land acquired by treaty and purchased from Indians thrown open to settlement, April 22, 1889. Oklahoma Territory, set off from western part of Indian Territory, organized May 2, 1890. Territorial government not provided till June, 1890. Sac and Fox, Iowa, and Pottawatomie Reservations added September 1890; Cheyenne and Arapahoe lands 1891; Cherokee Outlet 1893; Kickapoo Reservation in 1895; Greer county 1896, giving territory its present settled area of more than 19,000,000 acres. Two territories consolidated and admitted to Union as State of Oklahoma in 1907. First Southern state admitted to Union since admission of Texas sixty-one years ago; last of the thirteen states carved out of the Louisiana Purchase; population at time of admission four times as great as that of the next largest state.

Area.—Total area, 70,430 square miles; land, 69,830, water 600. State forms an irregular parallelogram, 440 miles wide and 340 long.

Physical Features.—Surface diversified. Large areas rolling and hilly; others level or undulating. Many rich prairies and fertile valleys. Elevation varies from 500 to 3,000 feet. Sugar Loaf Mountain highest point of altitude. Northeastern part rolling, and east central north of Arkansas River hilly and broken, containing part of Ozark Plateau. Range of hills extends from east central to southwest in wide spreading curve terminating in Wichita Mountains. In southeast are San Bois, Shawnee, and Wichita Hills. Surface intersected by numerous rivers and streams. Principal rivers Arkansas, Canadian and Red. Red River forms southern boundary. Abundant water facilities and almost perfect drainage. Surface soil chiefly of rich red clay or sandstone decomposition, with black alluvial deposits; highly productive and almost inexhaustible. Large areas heavily forested.

Climate.—Mild and healthful. Western part occasionally subject to cold northerly winds. Winters delightful; summers long and hot; heat modified by almost continual breezes. Rainfall slight in winter; usually abundant in summer. Not subject to severe storms. Fewer tornadoes and cyclones than many other sections of country. Average number of clear days 201; cloudy 71; rainy 58. Mean annual temperature 59 degrees; highest 83.2, lowest 29 5. Rainfall varies in different sections of state from 30.49 inches to 33.38.

Agriculture.—Soil, rainfall, climate favor all leading crops of north and south. Important feature, unusual number, and variety of products grown and matured. Principal crops, corn, cotton, wheat, rye, oats, potatoes, upland rice, castor beans, broomcorn, Kaffir corn, vegetables, melons, and fruits. State furnishes one-third castor beans used by castor-oil mills of United States; crop in 1900 estimated 150,000 bushels. Alfalfa, timothy, clover yield abundantly; shipments of baled hay from native grasses also important; supply inexhaustible. Peanuts grown extensively. Flax widely grown; yield in 1904 244,824 bushels, value $242,396. Wheat yields from 25 to 40 bushels per acre; oats 60 to 70; corn 50 to 60. Cotton cultivated south of Canadian and Arkansas rivers. North of Canadian and Arkansas rivers apples, pears, peaches, plums, cherries, and small fruits flourish. Total area under cultivation in 1905 nearly 8,000,000 acres, and more than 21,000,000 acres included in occupied farm lands. In 1905 3,808,079 acres planted to Indian corn; yield 110,442,368 bu., value $38,456,447; wheat 1,704,909 acres, yield 14,446,724 bu., value $10,198,249; hay 496,049 acres, yield 16,974,438 tons, value $5,212,901. Cotton crop next in importance to corn, yielded 449,666 bales in 1904, value $27,240,959.

Horticulture.—Nearly all fruits of temperate regions grown successfully; some semi-tropical fruits and nuts reach perfection; melons highly productive. Fruit trees of bearing age in 1900, 10,084,270; grape vines 3,542,034. Value of all fruit, $409,691. In 1890, 265 apple trees in state; in 1900, 2,054,894. All small fruits prolific and of fine quality.

Live Stock.—Extensive natural pasturage and favorable climate afford ideal stock-raising country. Cattle grazing chief interest of western section; eastern section engaged largely in swine-raising; poultry succeeds throughout state. In 1905 there were 4,357,486 farm animals, value $91,616,723, including 2,158,936 cattle, 1,346,964 swine, 624,906 horses, 141,021 mules, and 85,659 sheep.

Manufactures.—Manufacturing still in its infancy, but state has great natural resources; various industries receiving attention. In 1900 had 250 cotton gins and six cotton-seed oil mills, 43 flouring mills; foundries and planing mills in several cities; large cement works, stone quarries, and kindred industries; car-shops; salt manufactories; wine, fruit canning.

Minerals.—Coal most important; area covers about 20,000 square miles; underlies nearly entire eastern half of state; also mined in Pawnee and Payne counties. Production in 1904, 3,046,539 short tons; value $5,532,066. Petroleum and natural gas exist in large quantities. In 1904 state ranked 7th in production of both; value $7,014,930. Iron and manganese ores found, also gold and copper, in Wichita Mountains. Good building stone and excellent clay abound; immense gypsum beds in Blaine county; valuable salt deposits; asphalt near Ft. Sill; extensive deposits of cement worked. In Woods and Woodward counties are immense deposits of guano.

Wealth.—In 1900 taxable valuation of property, $50,000,000; real wealth, $135,000,000; products of farm, factory and mines aggregated $75,000,000. No accurate statistics later; but wealth of state in all departments has increased enormously.

Population.—In 1900 total population 790,391; native born, 769,853; foreign born, 20,538; white, 670,204; Indian, 64,445; negro, 55,684. Estimated population, 1907, 1,500,000.

Cities.—Oklahoma, flourishing city on North Fork of Canadian River; Population, 1906, 30,000; Guthrie, Capital, on Cimarron River, 17,000; Enid, 15,000; Shawnee, 15,000; Lawton, 9,200; Ardmore, 7,850; El Reno, 7,625; South McAlester, 6,200; Hobart, 6,000; Stillwater, 4,570; Muskogee, 4,254; Anadarko, 3,927; Kingfisher, 3,850; Tulsa, 3,575; Wagoner, 3,550; Perry, 3,351, Holdenville, 3,015.

Railways.—Total railway mileage in state, Jan. 1, 1906, 5,523 miles. One mile of railroad to every 12.84 square miles of area. State well covered, and construction proceeding rapidly.

Education.—Satisfactory conditions prevail. In more than 2,000 districts substantial brick or frame buildings are found and imposing structures for higher educational institutions. Separate schools provided for colored children. More than 30 schools, public and private, for higher education and one school for the deaf. School enrollment in 1904 was 191,301; total expenditure for public education, $2,003,240. State University at Norman; Agricultural and Mechanical College, Stillwater; Normal schools, Edmund and Alva; Colored Agricultural and Mechanical College, Langston; Chilocco Indian School, Kay County. Several Indian Colleges under supervision of general superintendent, with supervisors in Choctaw, Chickasaw, Creek, and Cherokee Nations.

Political.—Constitution secures right of suffrage to all without regard to race, color, or previous condition of servitude, and prohibition for twenty-one years to that part of the state known as Indian Territory, and the Osage Indian reservation. Has five Congressmen.

Legal Holidays.—January 1, February 22, May 30, July 4, Thanksgiving, December 25, and all elections.

Legal.—Statutes of limitation: Written contracts, 5 years; unwritten contracts, 3; judgments, 1 to 5. Redemption of tax sale, 2 years. Taxes are perpetual lien on real property. Legal rate of interest, 7 per cent; by contract, 12.

OKLAHOMA
KANSAS
TEXAS
ARKANSAS
MISSOURI
NEW MEXICO
COLORADO
Caldwell
Arkansas City
Newkirk
Ponca City
Pawhuska
Bartlesville
Coffeyville
Baxter
Englewood
Colin
Gate
Cline
Drule
Laverne
Beaver
Fort Supply
Logan
May
Woodward
Alston
Curtis
Tucker
Tandy
Whitehead
Gage
Persimmon
Shattuck
Hackberry
Goodwin
Moscow
Pearl
Orion
Dane
Whitehall
Chester
Weston
Tivoli
Plymouth
Hoyle
Sheridan
Marshall
Orlando
Yates
Stillwater
Mehan
Olive
Redfork
Taneha
Cushing
Ripley
Kellyville
Sapulpa
Stonebluff
Mounds
Ridge
Lee
Summ
Muskogee
Oak-tasha
Checotah
Bond
Eufaula
Senora
Enterprise
Indianola
Holdenville
Wetumka
Wewoka
Seminole
Lawton
Dewey
Bartles
Nowata
Watova
Lenapah
Delaware
Jacket
Blue
Eagle
Fairlands
Miami
Quapaw
Welch
Commerce
Grove
Vinita
Afton
Ketchum
Wyandotte
Ottawa
Southwest City
Seneca
Pryor Creek
Chouteau
Mazie
Locust Grove
Adair
Zena
Gravett
Siloam Springs
Kansas
Oaks
Ballard
Baptist
Wagoner
Coweta
Broken Arrow
Tulsa
Verdigris
Inola
Lelietta
Gideon
Rose
Talequah
Westville
Baron
Stilwell
Flint
Stone
Spur
Marble
Illinois
Sallisaw
Hanson
Moffitt
Cherokee
Fort Gibson
Haskell
Braggs
Muskogee
Webbers Falls
Oktaha
Checotah
Eufaula
Canadian
Deep Fk. of Canadian
Arlington
Creek
Okmulgee
Henryetta
Dewar
Bearden
Wetumka
Wewoka
Seminole
Konawa
Asher
Earlsboro
Maud
Tecumseh
Shawnee
Norman
Moore
Oklahoma
Yukon
Council
Britton
Edmond
Darlington
Harrah
Jones
Luther
Jarvis
Guthrie
Kingfisher
Hennessey
Dover
Lawrie
Cashion
Kingston
Langston
Mulhall
Orlando
Yates
Meridian
Seward
Waterloo
Wilson
Triangle
Stroud
Davenport
Bristow
Depew
Tuskegee
Bellvue
Hallett
Keokuk Falls
Kiowa
Lehigh
Coalgate
Atoka
Stringtown
Caney
Nelson
Caddo
Bokchito
Mashey
Durant
Armstrong
Fort McCulloch
Grant
Frogville
Limestone Gap
Clayton
Tushkahomma
Smithville
Octavia
Wadena
Kosoma
Rodney
Davenport
Antlers
Hamden
Goodland
Eagletown
Luktata
Goodwater
Shawneetown
Harris
Jumis
Broken Bow
Hochatown
Mountain Fork
Tom
Valliant
Finley
Swink
Hugo
Sawyer
Fort Towson
Doaksville
Clayton
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Panama
Heavener
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Thomasville
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Howard
Talihina
Antlers
Wilburton
Hartshorne
Haileyville
Kiamichi
Indianola
Enterprise
Featherston
Redoak
Krebs
Canadian
Tandy
Francis
Conway
Celestine
Legal
Jeffs
Kiowa
Phillips
Chili
Butler
Stanley

KANSAS. Kan'-zas. "Sunflower State."

Indian—signifies, "Smoky Water."

Historical.—Country visited by Spaniards, 1541; by French, 1719; part of it included in Louisiana purchase of 1803. Southwestern Kansas Mexican territory until 1848. First trading post established, 1800. From 1821 to 1834 constituted portion of Indian Country. Kansas Territory organized, 1854. Admitted into the Union January, 1861; the twenty-first State admitted. Kansas bore a prominent part during the Civil War and suffered greatly from border raids.

Area.—Total area, 82,080 square miles; land, 81,700; water, 380; average length, 400 miles; breadth, 200; has 106 counties. Reserved land, 987,875 acres

Physical Features.—Geographical center of the United States exclusive of Alaska and newly acquired territory. Surface mostly rolling prairie, sloping to the Missouri River; soil generally fertile. Extreme elevation in the northwest, 4,000 feet; in the southwest, 3,425 feet. The Missouri—only navigable river—forms the eastern boundary for 150 miles; an important commercial highway. Principal rivers, Kansas and Arkansas. Former with its tributaries drains more than half the State. The numerous streams afford abundant water power for factory and irrigation purposes.

Climate exceptionally healthful. There is wide range of temperature. Winters short; severity tempered by unusual dryness of the atmosphere. Summer heat modified by constant breezes; nights uniformly cool. Rainfall relatively small but evenly distributed; average for year increasing. Mean annual rainfall at Leavenworth, 38.4 inches; temperature, 53.5 deg.; highest, 107 deg.; lowest, 29 deg. below.

Agriculture.—State ranks high in all agricultural products; in 1900, first in wheat, second in hay, fourth in rye, fifth in corn and barley, and sixth in oats. Area and production of farm products, 1900: Wheat, 4,660,376 acres, 82,488,655 bushels; hay, 3,054,137 acres; 4,031,461 tons; barley, 194,735 acres, 4,186,802 bushels; rye, 126,479 acres, 1,922,481 bushels, corn, 8,624,770 acres, 163,870,630 bushels; oats, 1,362,783 acres, 43,063,943 bushels; potatoes, 100,642 acres, 7,246,224 bushels; flax, 4,186,802 bushels, 1,693,288 bushels flaxseed. Soil and climate favorable to the growing of tobacco, castor beans, cotton, sugar beets, and alfalfa; constantly increasing areas are being devoted to these pursuits. Silk culture is an important industry. Sorghum produced, 1900, 1,622,963 gallons, valued at $551,807; kaffir corn, 1,966,217 tons, value $5,750,285; alfalfa, 276,008 acres; acres under cotton, 163; product, 48,400 pounds, value $2,420. State has about 3,000 private irrigation plants. Net increase in value of crops of 1900 over 1899, $12,341,428.

Horticulture.—In 1900, 7,430,767 bearing apple trees, 3,196,790 peach, 880,670 cherry, 690,930 plum, 205,388 pear. There were 2,792 acres in nurseries, 3,833 under blackberries, 2,655 raspberries, 1,818 strawberries. There were 5,664 acres of vineyards, producing 118,000 gallons wine, valued at $88,540. Total garden products, $818,663; horticultural products, $457,725.

Live Stock, Etc.—Stock-raising ranks second only to the growing of cereals as a source of wealth. State well adapted to sheep husbandry and dairy-farming. Number and value of farm animals, June, 1900: Horses, 979,695, value $43,758,334; mules, 118,704, $6,507,916, sheep, 262,013, $833,827; milch cows, 676,456, $22,191,123; other cattle, 3,814,622, $95,449,678; swine, 3,594,859, $17,076,904; wool clip, washed and unwashed, 1901, 1,495,896 pounds; scoured, 493,646. Value of entire live-stock product, 1900, $186,317,248, dairy products, $7,459,693. Dairy interests date from 1882-3. Industry a profitable and growing pursuit. First separator creamery established 1886. State had over 400 creameries in 1898. Capital invested, $600,000, employés, 25,000, value of products, $8,000,000.

Manufactures.—Though not distinctly a manufacturing State, Kansas has many important industrial establishments. In 1900, 7,830 manufacturing establishments reported a combined capital of $55,827,362; employés, 39,053; annual wages, $16,317,689. Flouring mills, meat-packing houses, salt works, creameries, foundries, and agricultural implement and brick manufactories lead in importance. Value of the productions of 11 meat-packing establishments, $76,829,130, of 533 flouring mills, $21,926,768. Oleomargarine manufactured, 1901, 16,360,484 pounds. Capital invested in 94 foundries, $2,450,324; value of products, $2,804,268. The total output of Kansas salt plants was 2,233,878 barrels, value $1,076,945; third salt-producing State. Value of brick and tile, $1,002,689; lime, $3,192. Value of hydraulic cement, 1897, $64,000. Kansas and Indian Ter (1901) produced 22,468 gallons of distilled spirits and 9,022 barrels of fermented liquor. In 1900, 289 cigar factories used 461,120 pounds of tobacco; output, 25,275,533 cigars; 40 other factories manufactured 2,818 pounds of plug and 42,051 pounds of smoking tobacco.

Minerals.—Lead, zinc, and coal are the chief minerals. In 1900 Kansas ranked first in output of zinc; largest lead and zinc mining camp in the world is in Cherokee County. Bituminous coal area, 17,000 square miles; centers of industry, Cherokee, Crawford, Leavenworth, and Osage counties. Petroleum and natural gas industries of southeastern sections growing rapidly in importance; estimated area of fields, 8,500 square miles. Iola and Coffeyville gas fields most profitable. An inexhaustible supply of glass sand exists near Atchison. Value of zinc and lead, 1899, Galena-Joplin mines, $10,715,307. In 1900, Kansas produced 62,136 short tons of zinc spelter, or 50 per cent of total product of United States. Output of zinc ore from the Galena-Joplin district in 1900, 244,629 short tons, valued at $6,583,944; lead output, 29,176 tons, value $1,402,678, production 1894–1900: Zinc, 1,359,278 tons, lead, 201,070 tons, value both ores, $41,717,118. Value of natural gas in 1900, $356,900; yield of petroleum, 74,714 barrels, value $69,142. Petroleum produced from 1889 to 1900 inclusive, 516,593 barrels. Value coal mined, 1900, $5,454,691; salt, $1,076,945; clay goods, $1,016,750; gypsum, with Iowa, $904,263, limestone, $339,466; sandstone, $55,173, sand, 1897, $45,000.

Population.—Ranked thirty-third in 1860; twentieth, 1880, nineteenth, 1890; twenty-second, 1900. Total population in 1860, 107,206; 1880, 996,096; 1890, 1,427,096. Total population, 1900, 1,470,495: Male, 768,719; female, 701,779; native, 1,343,810; foreign, 126,685; white, 1,416,319, colored, 54,176; Africans, 52,003; Chinese, 39, Japanese, 4; Indians, 2,130.

Cities.—*Kansas City*, commercial metropolis of the State, and a prominent railroad center; has extensive stock yards, meat packing establishments, smelters, foundries, etc.; population, 1900, 51,418. *Topeka*, the capital, is an important railway center, with extensive manufactures; population, 33,608. *Wichita*, on the Arkansas River, leading city of Southern Kansas; has glass factories, flour, planing, and woolen mills, carriage factories, etc.; population, 24,671. *Leavenworth*, on the Missouri River, railway and commercial center, with extensive manufacturing industries; population, 20,735. *Atchison* has an important trade by rail and river, and is the seat of many flouring industries; population, 15,722. *Lawrence*, seat of University of Kansas; population, 10,862. *Fort Scott*, center for mining and shipping of bituminous coal; population, 10,322. *Pittsburg* has important zinc and silver smelting works; population, 10,112.

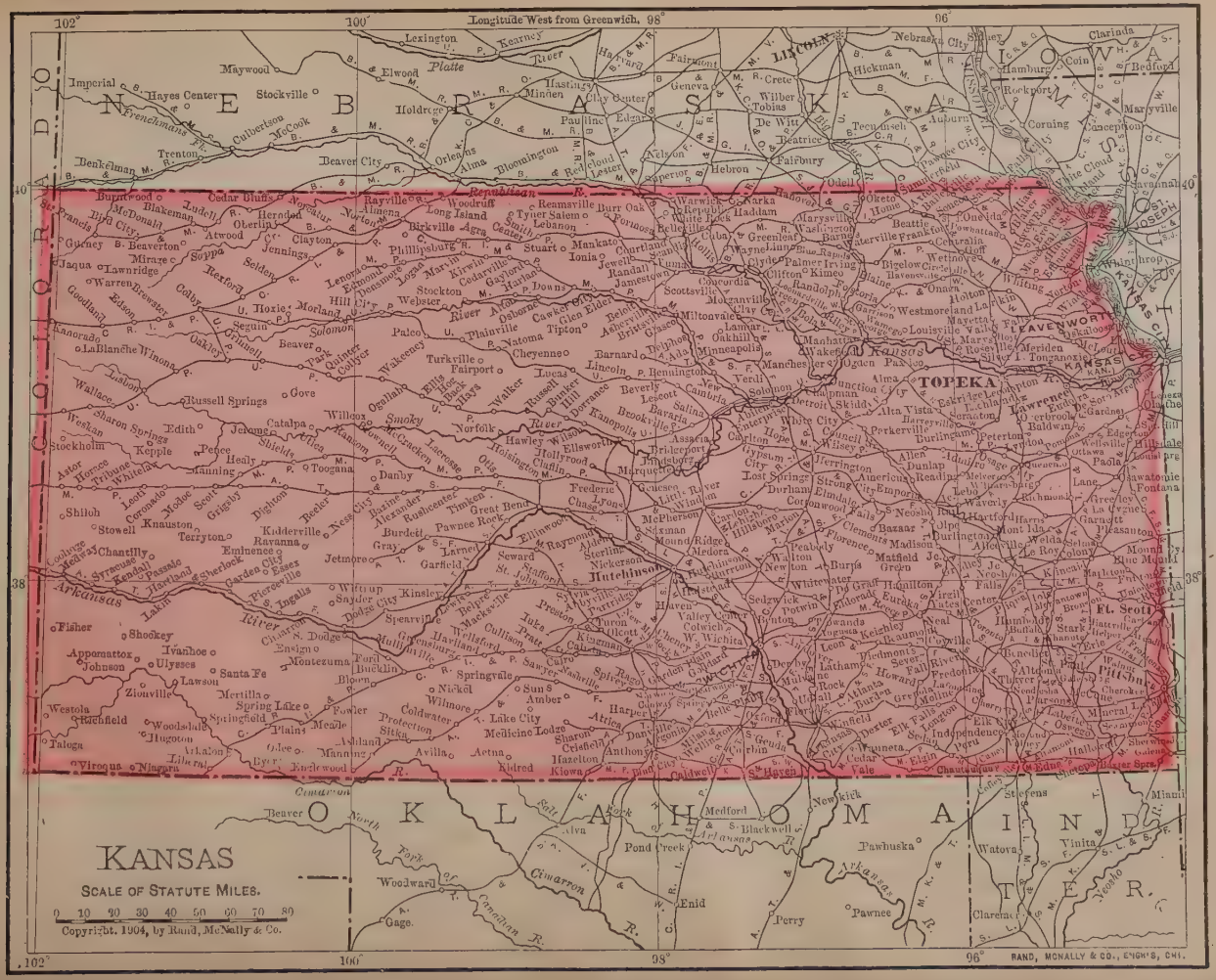
Railways.—The Union Pacific first line to enter State; completed 40 miles of road in 1863-4. The Atchison, Topeka & Santa Fe reached Kansas, 1873. Road in operation, 1870, 1,501 miles, 1875, 2,150; 1880, 3,400; 1885, 4,520; in July, 1900, 8,719.36 miles.

Education.—Free schools have been conducted since 1855. Public school enrollment, 1899-00, 464,590; expenditure, $4,622,364, school age, 5-21; compulsory school age, 8-14. Educational institutions: University of Kansas, Lawrence, opened 1866; State Normal School at Emporia, opened 1865; State Agricultural College near Manhattan; Industrial School for Girls at Beloit.

Political.—State elections biennial. State, congressional, and presidential elections, Tuesday after first Monday in November. Number of Senators, 40; Representatives, 125; sessions biennial, in odd-numbered years; meets second Tuesday in January; limit of session, 50 days; term of Senators, 4 years; Representatives, 2 years. Number electoral votes, 10. Voters must be citizens or declared intention; resident of State 6 months; county, town, and precinct, 30 days; registration required in cities only. Idiots, insane, and convicts excluded.

Legal Holidays.—January 1, February 22, Arbor Day, May 30, July 4, first Monday in September, general election day, Thanksgiving, and December 25.

Legal.—Statutes of limitation: Judgments, 5 years; actions for recovery of real property sold on execution, 5 years; all others, 15; written contracts, 5; others, 3; personal action, 2. Redemption from tax sales, 3 years. Legal rate of interest, 6 per cent; by contract, 10.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COLORADO
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Canadian R.
Salt Fork of Arkansas R.
Arkansas R.
Neosho R.
Osage
Lincoln
Ellsworth
Russell
Barton
Rice
Reno
Harper
Sumner
Cowley
Chautauqua
Montgomery
Labette
Cherokee
Crawford
Allen
Anderson
Franklin
Douglas
Johnson
Wyandotte
Leavenworth
Atchison
Jefferson
Shawnee
Osborne
Mitchell
Cloud
Clay
Riley
Pottawatomie
Jackson
Nemaha
Brown
Doniphan
Marshall
Washington
Republic
Jewell
Smith
Phillips
Rooks
Ellis
Trego
Graham
Gove
Logan
Wallace
Greeley
Wichita
Scott
Lane
Ness
Rush
Pawnee
Edwards
Kiowa
Pratt
Stafford
Hodgeman
Ford
Gray
Meade
Clark
Comanche
Barber
Harper
Kingman
Sedgwick
Butler
Greenwood
Elk
Chase
Lyon
Coffey
Woodson
Wilson
Neosho
Morris
Wabaunsee
Shawnee
Topeka
Lawrence
Leavenworth
Kansas City
Fort Scott
Pittsburg
Parsons
Coffeyville
Independence
Winfield
Arkansas City
Wellington
Hutchinson
Salina
Abilene
Manhattan
Junction City
Ottawa
Emporia
Newton
Wichita
Great Bend
Larned
Dodge City
Garden City
Hays City
Colby
Goodland
Oberlin
Norton
Phillipsburg
Beloit
Concordia
Clyde
Clifton
Belleville
Republic
Mankato
Jewell City
Scottsville
Miltonvale
Minneapolis
Lamar
Oakhill
Glasco
Delphos
Bennington
Lincoln
Barnard
Tipton
Paleo
Plainville
Natoma
Cheyenne
Turkville
Pairfort
Wakeeney
Quinter
Collyer
Gorham
Russell Springs
Catalpa
Willow
Norfolk
Hawley
Wilson
Ellsworth
Tricketport
Assaria
Brookville
Kanopolis
Barrata
Salina
Lucas
Sylvan Grove
Walker
Dorrance
Bunker Hill
Russell
Luray
Ogallah
Hays
Victoria
Schoenchen
Ellis
Walnut
Pfeifer
Catharine
Bickerdyke
Herndon
Grainfield
Gem
Kanorado
Edson
Goodland
Sharon Springs
Weskan
Stockholm
Kepple
Peace
Healy
Manning
Astor
Horace
Tribune
Whitelaw
Leoti
Coronado
Modoc
Scott
Grigsby
Shiloh
Stowell
Knauston
Terryton
Chantilly
Coolidge
Cedar
Syracuse
Kendall
Passaic
Hartland
Sherlock
Garden
Essex
Pierceville
Ingalls
Lakin
Deerfield
Hartland
Fisher
Shookey
Ivanhoe
Appomattox
Johnson
Ulysses
Santa Fe
Lawson
Zionville
Mertilla
Spring Lake
Springfield
Westola
Richfield
Woodsdale
Hugoton
Taloga
Virogua
Niagara
Arkalon
Liberal
Eyer
Englewood
Meade
Fowler
Plains
Adland
Odee
Avilla
Aetna
Kindred
Protection
Sitka
Coldwater
Wilmore
Nickel
Lake City
Medicine Lodge
Sun
Amber
Harper
Attica
Danville
Sharon
Crisfield
Anthony
Hazelton
Kiowa
Caldwell
Milan
Argonia
Conway
Sylvia
Hutchinson
Partridge
Arlington
Preston
Inman
Yoder
Turon
Haven
Valley Center
Colwich
Wichita
Derby
Mulvane
Rock
Latham
Atlanta
Burden
Grenola
Elk Falls
Longton
Howard
Piedmont
Severy
Fall River
Madison
Virgil
Toledo
Eureka
Hamilton
Climax
Neal
Cottonwood Falls
Strong City
Emporia
Americus
Reading
Dunlap
Allen
Admire
Osage
Burlingame
Peterton
Scranton
Carbondale
Overbrook
Baldwin
Lawrence
Eudora
Gardner
Olathe
Edgerton
Wellsville
Ottawa
Paola
Hillsdale
Mound City
Blue Mound
Pleasanton
Fontana
Lane
Richmond
Waverly
Lebo
Harris
Mont Ida
Welda
Garnett
Colony
Greeley
Kincaid
Bronson
Fulton
Girard
Arma
Frontenac
Pittsburg
Scammon
Weir City
Cherokee
Columbus
Baxter Springs
Galena
Empire City
Carthage
Webb City
Joplin
Oronogo
Duenweg
Granby
Neosho
Seneca
Wentworth
Lamar
Nevada
Fort Scott
Bronaugh
Moran
Iola
Humboldt
Chanute
Erie
Thayer
Parsons
Oswego
Altamont
Labette
Mound Valley
Coffeyville
Dearing
Sedan
Cedarvale
Elgin
Chautauqua
Peru
Sedonia
Caney
Independence
Elk City
Longton
Howard
Grenola
Elk Falls
Moline
Fredonia
Neodesha
Buffalo
Altoona
Toronto
Yates Center
Piqua
Humboldt
Iola
Gas City
Garnett

NEBRASKA.

Ne-bras'-ka.

"Black-water State."

Indian—"Water Valley."

Historical.—Country probably visited by Spaniards in sixteenth century. French missionaries and traders entered the Territory about the middle of the seventeenth century. Formed part of the Louisiana purchase of 1803 and of Missouri Territory. Visited by Lewis and Clarke 1804-5. Government exploration by way of Platte Valley made under Major Long in 1820. First settlement made by whites at Bellevue 1847. Nebraska Territory organized 1854; admitted into the Union 1867; the twenty-fourth State admitted. Bellevue the first capital; seat of government removed to Omaha 1855; to Lancaster—now Lincoln—1867.

Area.—Total area, 77,510 square miles, or 49,177,600 acres; land, 76,840 square miles; water, 670; length from east to west, 413 miles; north to south, 208. Counties, 90. Reserved land, 69,902 acres.

Physical Features.—The surface is an undulating plain sloping gently toward the east. Highest altitude, White River Summit, 4,876 feet. Average eastern elevation, 1,400 feet; western, 2,312 feet. State notable for its numerous broad, shallow streams. Characteristic feature of the surface, many fertile bottom lands and valleys; one-fourth the entire area consists of well-watered valleys The Missouri River, the only navigable stream, forms the entire eastern and northeastern boundary, frontage, 500 miles; Platte River crosses the State from west to east. Next in importance are the Niobrara and Republican rivers.

Climate usually temperate throughout the State. Elevation of surface and purity of the clear, dry atmosphere render it unusually healthful. Average summer temperature, eastern section, 73 deg.; western slightly higher; winter about 20 deg., though somewhat lower in northwest and higher in southeast. Mean annual rainfall, Omaha, 31.7 inches; rainfall favorably distributed for farmer, no rain falling in winter. Mean annual temperature varies from 46 to 51 deg.; highest, 106 deg.; lowest, 32 deg. below.

Agriculture the leading industry. Soil in eastern section naturally adapted to agriculture; irrigation rapidly developing western sections. State has more than 10,000,000 acres under cultivation. In 1895 there were 2,219 miles of irrigating canals built or under construction; estimated increase in land values, 9,061,440. In 1900 Nebraska ranked third in production of corn, wheat, fifth. Area and yield of agricultural products, 1900: Corn, 8,093,464 acres, 210,430,064 bushels; wheat, 2,066,855 acres, 24,801,900 bushels, oats, 1,732,962 acres, 37,778,572 bushels, potatoes, 146,431 acres, 9,664,446 bushels; hay, 1,912,673 acres, 2,639,489 tons; flax, 1898, 24,000 acres, 240,000 bushels; buckwheat, 1900, 5,155 acres, 82,480 bushels; broom corn, 1898, 9,000 acres, 3,960,000 pounds Soil and climate specially adapted to culture of sugar beet; industry important and extending rapidly; area under beets, 1898, 5,000 acres. Alfalfa, castor beans, tobacco, and chicory are grown with excellent results. In 1900 the yield of rye was 867,237 bushels; barley, 587,382 bushels, sweet potatoes, 1898, 94,457 bushels; chicory, 2,638 tons. Honey is an important product; bees number 28,029 stands, 1898, valued at $105,422.

Horticulture.—Fruit growing an important and growing industry. All fruits indigenous to temperate climates grown under natural conditions in eastern and southeastern sections, under irrigation in central and western sections. Apples the chief crop; plums, peaches, and small fruit may be raised in abundance. Area under orchards, etc., 1897, 500,000 acres. Estimated number of fruit trees, 5,500,000; grape vines, 1,500,000. Apple crop, 810,852 bushels, value $333,995; plums, 30,567 bushels, $19,913; peaches, 66,482 bushels, $37,382; berries, 31,873 bushels, $52,827; cherries, 2,543 bushels; grapes, 343,013 baskets.

Live Stock and Dairy.—Large proportion of area specially adapted to grazing. Stock-raising an industrial pursuit second only to agriculture in importance. State ranks among the prominent meat-producing States of the West. Number and value of farm animals, June, 1900: Horses, 329,972, $7,788,672; mules, 55,124, $3,171,460; sheep, 511,273, $1,678,498; milch cows, 512,544, $17,192,120; other cattle, 2,663,699, $65,277,378; hogs, 4,128,000, $18,660,932; wool clip, 1901, 2,471,453 pounds. Dairy and poultry farming are important and growing industries. State contains 164 creameries. Butter produced, 1897, 15,903,627 pounds, value $2,103,997; milk, 100,651,545 pounds, value $1,016,514; poultry, 4,529,088, value $998,415; eggs, 16,420,596 dozen, value $1,530,378.

Manufactures.—Industries rapidly increasing in number and importance. Principal manufactures: Farm implements, foundry and machine shop products, liquors, lumber, etc. Milling and the packing of meat and meat products are prominent pursuits, engaging extensive capital. Beet sugar refineries—Norfolk and Grand Island—third in importance in the country; sugar refined, 1898, 10,575,000 tons, value $528,753. Manufacture of chicory a new and promising pursuit; only factory in America for home-grown chicory at O'Neill. Value of brick and tile, 1900, $839,815; product of 391 harness and saddle manufactories, $1,783,742; 19 breweries, $1,433,501; 8 meat-packing establishments, $71,018,339; 141 cigar factories, $702,037, 45 carriage and wagon factories, $248,182. First iron works operated at Omaha 1879. Capital invested in brick and tile, 1900, $1,275,533; railroad shop construction, $3,635,267, printing and publishing, $2,885,583; saddlery and harness, $1,340,511; dairy factories, $952,185; planing mill products, $378,966, in flour and feed mills, $4,335,934. Fermented liquors, with Dakotas, 1901, 255,792 barrels; distilled spirits, 2,137,759 gallons.

Minerals.—Coal mined in the southwestern and northeastern parts of the State. Output comparatively small. Limestone quarried chiefly in Cheyenne, Gage, and Pawnee counties; value of output, 1900, $107,305. Salt basin near Lincoln covers an area of twelve by twenty-five miles; waters of springs contain 29 per cent of pure salt. Fuller's earth has been found south of Valentine.

Population.—Nebraska ranked thirty-ninth in population in 1860, thirty-sixth in 1870, twenty-sixth in 1890, and twenty-seventh in 1900. Total population, 1860, 28,841; 1870, 122,993; 1880, 452,402; 1890, 1,058,910, 1900, 1,066,300: Male, 564,592; female, 501,708; native, 888,953; foreign, 177,347; white, 1,056,526, colored, 9,774; Africans, 6,269; Chinese, 180; Japanese, 3, Indians, 3,322.

Cities.—*Omaha*, metropolis and eastern terminus of Union Pacific Railway; flourishing commerce and manufactures; silver smelting works; large stock yards and meat-packing houses; population, 1900, 102,555. *Lincoln*, capital, railroad center with good trade in grain and cattle; population, 40,169. *South Omaha*, an important suburb of Omaha; has large industrial interests; population, 26,001. *Beatrice*, railroad center on Big Blue River; has quarries of magnesian limestone, and brick factories; population, 7,875.

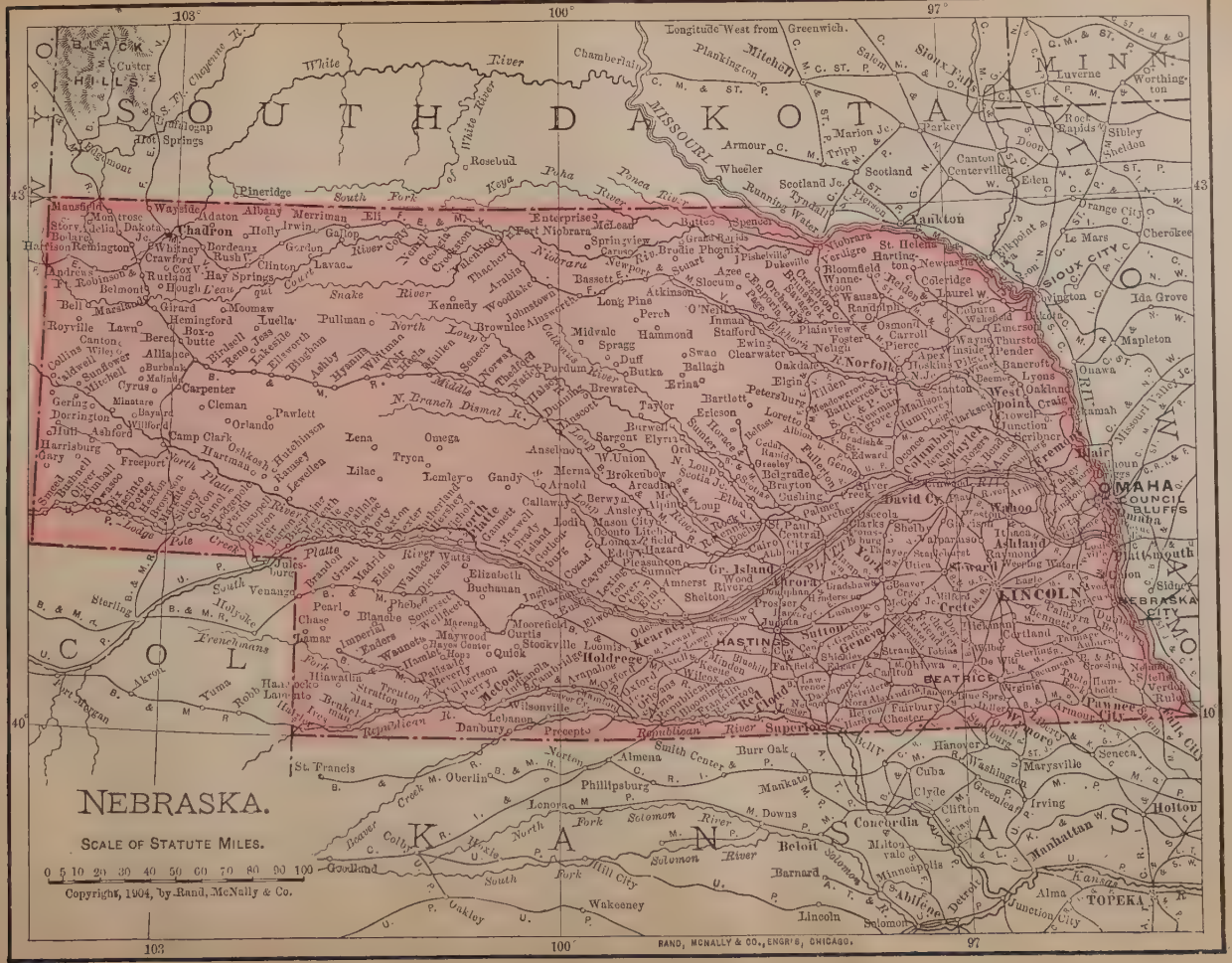
Railways.—First road to enter the State, Union Pacific, chartered 1862; work begun 1863, and by May, 1866, 75 miles had been completed west of Omaha; in July, 125 miles; May, 1869, the entire road was open to Ogden, Utah. Burlington & Missouri was completed to Kearney Junction, 1872. Mileage. 1870, 705; 1875, 1,127; 1880, 1,953; 1885, 2,963; 1890, 5,407; July, 1901 5,684.85, averaging 53.31 miles to each 10,000 inhabitants.

Educational.—Public school enrollment, 1899-00, 321,800, expenditure, $4,403,222, school age, 5-21; compulsory school age, 8-14, text-books furnished. Nebraska claims lowest rate of illiteracy of any State in the Union. "Free attendance" law provides for education of pupils in neighboring high schools whose education can not profitably be continued in home district. The University of Nebraska is at the head of the State educational system, with Agricultural College, Lincoln; State Normal School, Peru; State Industrial School, Kearney; Industrial School, Geneva.

Political.—State elections, biennial. State, congressional, and presidential elections, Tuesday after first Monday in November; number of Senators, 33; Representatives, 100; term, 2 years; sessions biennial, in odd-numbered years, meets first Tuesday in January; limit of session, 60 days. Number of electoral votes, 8. Voters must be citizens or declared intention; residents of State 6 months, of county 40 days, town 10 days, precinct 10 days: registration required in all cities. Idiots, insane, and convicts unless pardoned, excluded. Women vote at school elections.

Holidays.—January 1, February 22, April 22 or Arbor Day, May 30, July 4, Labor Day, Thanksgiving, December 25, and Fast days when so appointed.

Legal.—Statutes of limitation: Judgments, 5 years; foreclosure mortgage, recovery real property, 10; personal actions, 1. Legal interest rate, 7 per cent; by contract, 10.


NEBRASKA.
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60 70 80 90 100
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SOUTH DAKOTA
COLORADO
KANSAS
MINNESOTA
IOWA
MISSOURI
Longitude West from Greenwich.
103°
100°
97°
43
40
Chadron
Rushville
Gordon
Hay Springs
Rushville
Crawford
Whitney
Bordeaux
Clinton
Lavaca
Belmont
Hough
Girard
Moomaw
Hemingford
Box Butte
Alliance
Burbank
Carpenter
Cleman
Pawlett
Orlando
Camp Clark
Oshkosh
Hutchinson
Ramsey
Hartman
Lewellen
Lena
Omega
Tryon
Lilac
Lemley
Gandy
Merna
Arnold
Callaway
Berwyn
Ansley
Loup City
Mason City
Comstock
Litchfield
Elyria
Hazard
Pleasanton
Sumner
Elizabeth
Buchanan
Pearl
Blanche
Chase
Lamar
Maywood
Curtis
Stockville
Moorefield
Loomis
Holdrege
Orleans
Amboy
Oxford
Arapahoe
Wilsonville
Danbury
Republican
Precepts
Superior
Hardy
Nelson
Guide Rock
Red Cloud
Inavale
Blue Hill
Hastings
Kenesaw
Juniata
Shelton
Wood River
Gr. Island
Alda
Doniphan
Grand Island
Cairo
Central City
Archer
Palmer
Cushing
Greeley
Belgrade
Brayton
Genoa
Fullerton
Albion
Petersburg
Elgin
Erina
Ord
Taylor
Ericson
Burwell
Sargent
Ansley
Arcadia
Scotia
Elba
Loup
Tuck
Duff
Ballagh
Swan
Clearwater
Oakdale
Norfolk
Tilden
Meadow Grove
Battle Creek
Newman Grove
Madison
Norfolk Jc.
Stanton
Pilger
Beemer
Wisner
Oakland
Craig
Lyons
Decatur
Tekamah
Crowell
Junction
Scribner
Fremont
Hooper
Dodge
Nickerson
Arlington
Blair
Kennard
Herman
Irvington
Waterloo
Valley
Elkhorn
Omaha
Council Bluffs
Florence
Bellevue
Papillion
Gretna
Plattsmouth
Weeping Water
Nehawka
Union
Louisville
Ashland
Raymond
Eagle
Greenwood
Wahoo
David City
Shelby
Osceola
Clarks
Silver Creek
Leigh
Schuyler
Rogers
Howells
Dodge
Scribner
Snyder
Uehling
Colon
Sidney
Nebraska City
Auburn
Peru
Nemaha
Brownville
Rulo
Falls City
Humboldt
Table Rock
Pawnee City
Lincoln
Crete
Denton
Hickman
Cortland
Firth
Panama
Roca
Princeton
Milford
Seward
Utica
Staplehurst
Garrison
Goehner
Beaver Crossing
Tamora
Bee
Geneva
Fairmont
Exeter
Shickley
Fairfield
Sutton
Glenvil
Clay Center
Harvard
Ong
Strang
Fairbury
Chester
Daykin
Hubbell
Endicott
Diller
Odell
Barneston
Dillon
Beatrice
Virginia
Wymore
Blue Springs
Liberty
Adams
Hanover
Washington
Marysville
Seneca
Oketo
Frankfort
Vermillion
Summerfield
Cleburne
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Powhattan
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Whiting
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Gilman City
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Republican City
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Phillipsburg
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Solomon River
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Abilene
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Alma
Junction City
Topeka
Wakeeney
Lincoln
Solomon
Hill City
Oakley
Goodland
St. Francis
Benkelman
Culbertson
McCook
Indianola
Arapahoe
Oxford
Orleans
Amboy
Holdrege
Loomis
Stockville
Moorefield
Curtis
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Elwood
Gothenburg
Lexington
Overton
Elm Creek
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Holdrege
Loomis
Stockville
Moorefield
Curtis
Maywood
Elwood
Gothenburg
Lexington
Overton
Elm Creek
Odessa
Kearney
Minden
Wilcox

SOUTH DAKOTA

Da-kō′ ta. "Coyote" or "Swiagecat" State.

Indian—Dahkotah, "Leagued."

Historical.—Territory originally part of Louisiana purchase of 1803; became part of Minnesota Territory, 1849; from 1854-64 a portion was included in Nebraska. First explorations made by Lewis and Clarke, 1804-5. First settlement made at Sioux Falls, 1856. Dakota Territory organized March 2, 1861. State Constitution adopted October 1, 1889. The fortieth State to enter the Union; admitted November 2, 1889.

Area.—Total area, 77,650 square miles, or 49,696,000 acres; land, 76,850 square miles; water, 800; breadth, 380 miles; length, 245. Counties, 78. Appropriated land, 11,930,809 acres; unsurveyed land, 317,866; reserved land, 12,909,822.

Physical Features.—The surface of South Dakota is an undulating plain about equally divided by the Missouri River; eastern section generally level or rolling; western, rolling, with numerous hills and buttes, terminating in the southwest in the Black Hills. Highest altitude, Harney Peak, 7,368 feet. Elevation of Big Stone Lake, 9,678 feet. Western and central sections drained by the Missouri and its tributaries; within the eastern section lie mainly the valleys of the James and Big Sioux rivers. The most characteristic of the "Bad Lands" or "Mauvaises Terres"—so called because of the difficulty with which they are traveled—covering an area of 100 square miles, are between the Cheyenne and White rivers, east of the Black Hills. Among notable natural features are the well-known Hot Springs in Fall River County, and Wind Cave, said to rival in extent the famous Mammoth Cave of Kentucky.

Forests.—Black Hills area well wooded; Norway pine most abundant and valuable; black and white spruce in the valleys of the northern and central sections of this locality. Black Hills forest reserve, 967,680 acres. Outside the Black Hills there is little timber except the woodlands bordering the streams and lakes. Much attention is being given to tree planting and there are now more than 130,000 acres planted with alder, ash, maple, and other trees.

Climate dry, healthful, and bracing; sunshine almost incessant; average number cloudy days in year, 60. Variations in temperature greater than in Atlantic States in same latitude. Winters long, but severity modified by dryness of the atmosphere; summers mild and pleasant. Rainfall sufficient to mature crops, but uncertain in distribution. Underground supply of water usually abundant; artesian wells numerous, especially in James River Valley. Mean annual rainfall at Yankton, 26.8 inches; mean annual temperature, 46.3 deg.; highest, 103 deg.; lowest, 34 deg. below.

Agriculture.—Agriculture the leading industry, engaging two-thirds of the people. Soil especially adapted to the production of the cereals; wheat the staple crop; finest wheat grown in the James River Valley. Corn an important crop, particularly in the south; oats in the valleys of the Sioux and James rivers. Excellent flax, barley, hay, sorghum, potatoes, and garden vegetables are produced. The hardier fruits are successfully grown, especially in the Black Hills section. From the more favored sections are exported apples, grapes, currants, gooseberries, etc. Much attention is given fruit culture; horticulture interests promoted by organized societies. Many of the river valleys and the lowlands of the Black Hills yield annually large crops of wild hops. Production of corn, 1900, 1,200,697 acres, 32,418,819 bushels; wheat, 2,920,244 acres, 20,149,684 bushels; oats, 588,524 acres, 12,653,266 bushels; hay, 1,149,319 acres, 2,064,196 tons; potatoes, 55,217 acres, 4,030,841 bushels; flax, 1898, 300,000 acres, 2,550,000 bushels flaxseed.

Live Stock.—Stock-raising a profitable industry throughout the State. Cattle and horses of South Dakota of superior quality, owing to an invigorating climate, abundance of pure water, and excellent character of native grasses. Sheep husbandry and the raising of swine are promising pursuits in all parts of the State. Number and value of farm animals, June, 1900: Horses, 480,768, value $20,085,687; mules, 6,804, value $315,609; sheep, 775,236, value $2,434,206; milch cows, 270,634, value $8,400,818; other cattle, 1,276,166, value $29,447,115; swine, 823,120, value $3,540,072; wool clip, 1901, 2,777,190 pounds.

Manufactures.—Great natural advantages and a wealth of raw materials afford superior facilities for pursuit of industrial enterprises. The milling industry is the most extensive and important in the State. Number and capacity of flouring mills extending rapidly. Dairying is a prominent pursuit and a growing source of wealth. State has about thirty creameries and ten cheese factories. Manufacture of brick and terra cotta is becoming a profitable industry. Value brick and tile manufactured 1900, $43,440. Cement and lime are made from rock found in different localities throughout the State. Portland cement manufactured, 1896, 24,000 barrels, value $48,000. Number of manufacturing establishments, 1900, 1,639; value of land and buildings, $2,180,472; assessed value of real estate, $132,562,815, average number of employés, 3,432; total wages, $1,730,642; cost of material used, $7,827,110; value of entire product, $12,231,239.

Minerals.—The Black Hills region is exceedingly rich in minerals, wealth of resources largely undeveloped. Gold mining began in the Hills in 1873; value of production, 1900, $6,177,600; silver, $332,444. In 1900 State ranked fourth in production of gold and eighth in silver. Gold output, 298,842 fine ounces, year's decrease of 14,120; silver, 536,200 fine ounces, year's increase of 390,600; coinage value, 1900 product, $693,269. Valuable deposits of tin have been located around Harney's Peak and in Nigger Hill region, Black Hills produced first metallic tin in America. Copper, lead, mica, cement, gypsum, clays, and building stones also found in abundance. Most extensive beds of fuller's earth yet opened in the West are in South Dakota. Natural gas, petroleum, and coal exist; salt is found in the oil district. Productive limestone quarries are in Lawrence and Custer counties; value of output, 1900, $47,762. Inexhaustible quantities of the finest granite exist in the southeastern part of the State. Total value of granite quarried, $114,115. Output of mica, 123,090 pounds sheet, 80 tons scrap. Copper output, 15,147 pounds; sandstone, $12,675. Gypsum output, 200 tons.

Population.—Ranked thirty-seventh in 1890 and 1900. Population, 1890, 328,808; 1895, 330,975; 1900, 401,570: Male, 216,164, female, 185,406, native, 313,062; foreign, 88,508; white, 380,714, colored, 20,856; African, 465, Chinese, 165; Japanese, 1, Indians, 20,225.

Cities.—*Sioux Falls*, commercial metropolis and largest city in State. Situated at falls of Big Sioux River, near important granite quarries; has numerous industrial establishments; population, 1900, 10,266. *Yankton*, on the Missouri River, 200 miles by water above Omaha, has flour and steam sawmills, breweries, machine shops, etc.; steamboats ply the river to Fort Benton; population, 4,125. *Lead*, population, 6,210, and *Deadwood*, 3,498, are flourishing towns in the heart of the Black Hills, with important mining interests. *Pierre*, the capital, a thriving city in center of the State, on the Missouri River; an important live-stock market; population, 2,306.

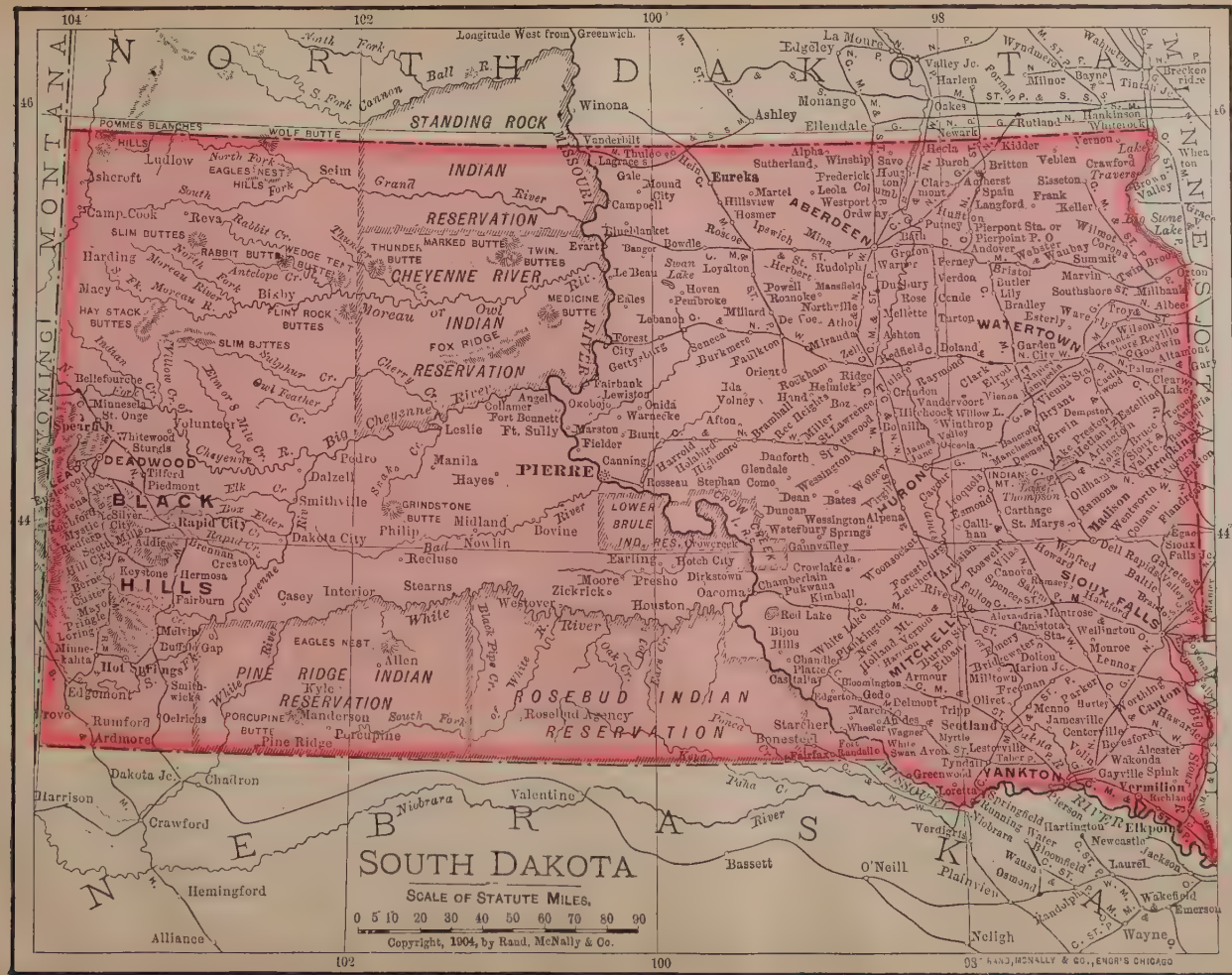
Railways.—First railroad entered the State, 1872. Mileage, 1890, 2,610.41; 1893, 2,792.15; July, 1900, 2,849.83.

Education.—Public school enrollment, 1899-00, 117,610; private, 1893-4, 1,888, school age, 6-20, compulsory school age, 8-14, expenditure, $1,598,757. Public high schools, 61; private secondary schools, 7. Educational institutions include University of South Dakota, located at Vermillion, 1862; State Normal Schools at Madison, Spearfish, and Springfield; Agricultural College with experimental farm of 240 acres, Brookings; School of Mines, Rapid City; School for Deaf Mutes, Sioux Falls; State Reform School, Plankinton.

Political.—State elections biennial. State, congressional, and presidential elections, Tuesday after first Monday in November. Number of Senators, 45; Representatives, 87; sessions biennial, in odd-numbered years; meets Tuesday after first Monday in January; limit of session, 60 days; term of Senators and Representatives, 2 years. Number of electoral votes, 4. Voters must be citizens or declared intention, residents of State 6 months, county 3 months, town and precinct 10 days; registration limited. Idiots, insane, and convicts unless pardoned, excluded.

Legal Holidays.—January 1, February 22, July 4, first Monday in September, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, recovery real property, sealed instruments, 20 years; contracts, 6; personal actions, 2; redemption of taxes, 2. Legal interest rate, 7 per cent; by contract, 12.


SOUTH DAKOTA
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60 70 80 90
Copyright, 1904, by Rand, McNally & Co.
RAND, MCNALLY & CO., ENGR'S CHICAGO
NORTH DAKOTA
MONTANA
WYOMING
NEBRASKA
MINNESOTA
IOWA
STANDING ROCK INDIAN RESERVATION
CHEYENNE RIVER INDIAN RESERVATION
FOX RIDGE RESERVATION
PINE RIDGE INDIAN RESERVATION
ROSEBUD INDIAN RESERVATION
LOWER BRULE IND. RES.
ABERDEEN
WATERTOWN
SIOUX FALLS
MITCHELL
YANKTON
PIERRE
DEADWOOD
BLACK HILLS
Longitude West from Greenwich.
104
102
100
98
46
44

663

NORTH DAKOTA. Da kō'-ta. "Sioux" or "Flickertail" State

Indian—Dahkotah, "Leagued."

Historical.—North Dakota formed part of the Louisiana purchase of 1803. Exploring expedition of Lewis and Clarke spent the winter of 1804-5 among the Mandan Indians, near the present site of Bismarck, Pembina settled by Lord Selkirk, 1812. American Fur Company dominant factor in this section from 1832. Dakota Territory, including parts of Wyoming and Montana, organized 1861; area reduced, 1868. Admitted to the Union November 2, 1889. The thirty-ninth State to enter after the adoption of the Federal Constitution.

Area.—Total area, 70,795 square miles; land, 70,195 square miles, or 44,924,800 acres; water, 600 square miles; breadth, 360 miles, length, 210. Counties, 45. Unappropriated lands, 18,725,239 acres; surveyed, 12,597,130 acres, reserved, 3,370,291. Lands already taken up, 22,814,550 acres. Government land offices at Minot, Devil's Lake, Grand Forks, Bismarck, and Fargo.

Physical Features.—Surface is mostly level and rolling, with many fertile hills and broad alluvial valleys. In the west and southwest are the "Bad Lands." Country well watered. Missouri River and its tributaries drain the western and southwestern sections; northern and eastern sections drained by Mouse and Red River of the North. Greatest elevation, Sentinel Butte, 2,707 feet. Between the Red and Missouri rivers is a grassy plain—the Coteau du Missouri—of 30,000 square miles. Lakes abound in almost every county. Devil's Lake, a picturesque sheet of salt water in the northeast, with no visible outlet, has an elevation of 1,434 feet above sea level. Length nearly 50 miles; greatest width, 12 to 15 miles. On the north shore are the Chautauqua grounds, on the south, historical Fort Totten, now occupied by an Indian industrial school.

Timber.—Native timber covers about 460,000 acres; distributed mostly along the rivers tributary to Red River of North and surrounding lakes. Government is encouraging planting of trees, and large areas have been set to cottonwood, elder, and other varieties.

Climate remarkably healthful. Atmosphere dry and stimulating, with generally clear skies and brilliant sunshine. Winters sometimes severe with occasional blizzards. Summer and autumn peculiarly delightful. Rainfall sufficient if distribution is seasonable; greatest in south and west. Mean annual rainfall at Bismarck, 18.4 inches; mean annual temperature, 39.9 deg.; highest, 105 deg.; lowest, 44 deg. below.

Agriculture the chief source of wealth. State noted for production of wheat. Wheat farms of 20,000 acres not uncommon. Other cereals, flax, and all root crops, especially potatoes, yield abundantly. Three-fourths of wheat produced in State grown in James River Valley. Flax cultivated for seed and oil. Area in farms, 1897, 8,046, 896 acres; under cultivation, 5,160,896 acres; products, 1900: Wheat, 2,689,023 acres, 13,176,213 bushels; oats, 611,581 acres, 6,299,284 bushels; barley, 243,761 acres, 1,998,840 bushels; rye, 16,152 acres, 83,990 bushels, corn, 23,824 acres, 381,184 bushels, potatoes, 29,555 acres, 1,536,860 bushels; 1898: Flax, 204,460 acres, 1,956,205 bushels of flaxseed, millet and Hungarian grasses, 83,786 acres, 122,787 tons; other tame grasses, 32,051 acres, 36,683 tons; prairie hay cut, 919,493 tons. Number of farms, 1898, 31,653; area, 8,902,731 acres: under cultivation, 5,587,849 acres. Number of fruit trees bearing, 1897, 3,017; non-bearing, 7,680; area in berries, 5,987 acres; value of fruit and garden products marketed, $28,592.

Live Stock.—Stock-raising second only to agriculture in importance. Estimated area of natural grazing lands, 40,000,000 acres. Live stock—particularly cattle and sheep—and dairy interests centered mostly in the Mouse River country and the grassy hills to the southwest. Particular attention given to breeding of cattle and horses. Number and assessed valuation of farm animals, 1900: Horses, 359,948, value $22,728,511; mules, 6,880, $476,366; cattle, 657,434, $15,810,637, sheep, 681,952, $1,987,136, hogs, 191,798, $930,470, total value of live stock, $41,951,659. Value of meat products and live stock sold, 1897, $10,000,000. Wool clip, 1901, 2,921,204 pounds.

Dairies, Etc.—Introduction of creameries and cheese factories increasing the value of cows and giving new impetus to the dairy interests of State. Increased wealth of State through dairy industry, 1895, $1,499,468. Receipts from factory-made cheese, $33,448; creamery butter, $51,215. During the year, 26 cheese factories produced 412,946 pounds of cheese, and 16 creameries produced 336,943 pounds of butter. Value of milk and milk products, 1897, $2,500,000. Milk sold to creameries and cheese factories, 2,675,359 pounds, value $73,782; value of milk sold elsewhere, $19,874. Home products: Cheese, 150,395 pounds; butter, 4,243,468 pounds. Value of poultry and eggs, $1,800,000; of poultry and eggs sold, $142,066.

Manufactures.—Production almost entirely domestic and for local consumption. Report of 1900 gave number of industrial firms as 1,130, capital employed, $5,396,490; employés, 2,566, value of materials used, $5,615,792, products, $9,183,114. Manufacture of flour one of the principal industries. Total number of mills in State, 1900, 97. Flour, lumber, and woolen mills located at Grand Forks. Development of the valuable clay deposits a growing occupation; value of brick and tile manufactured, 1900, $92,399.

Minerals.—Entire country west of Missouri, and large part of total area, underlaid with deposits of lignite coal. Coal excellent for heating purposes and possesses superior qualities for gas making. Mining operations are mainly along the Northern Pacific Railway, west of the Missouri River Output of mines for 1900, 129,883 short tons, value $158,348, an increase of one-third over the output of 1899. Salt springs exist in the Red River Valley.

Population.—North Dakota ranked forty-second in 1860, fortieth, 1880; forty-first, 1890 and 1900. Total, 1860, 4,837; 1880, 135,177; 1890, 182,719. The population in 1900 was 319,146: Male, 177,493; female, 141,653; native, 206,055; foreign, 113,091; white, 311,712; colored, 7,434; African, 286; Chinese, 32; Japanese, 148; Indians, 6,968.

Cities.—*Fargo*, on Red River of North, metropolis and railroad center, with a good trade, manufactures agricultural implements; population 1900, 9,589. *Grand Forks*, commercial center of Northeast Dakota, has large lumber mills, and is the seat of the University of North Dakota; population, 7,652. *Bismarck*, capital, a thriving city on Missouri River; population, 3,319. *Jamestown*, 98 miles east of Bismarck, railway junction in artesian well belt of James River Valley; population, 2,853.

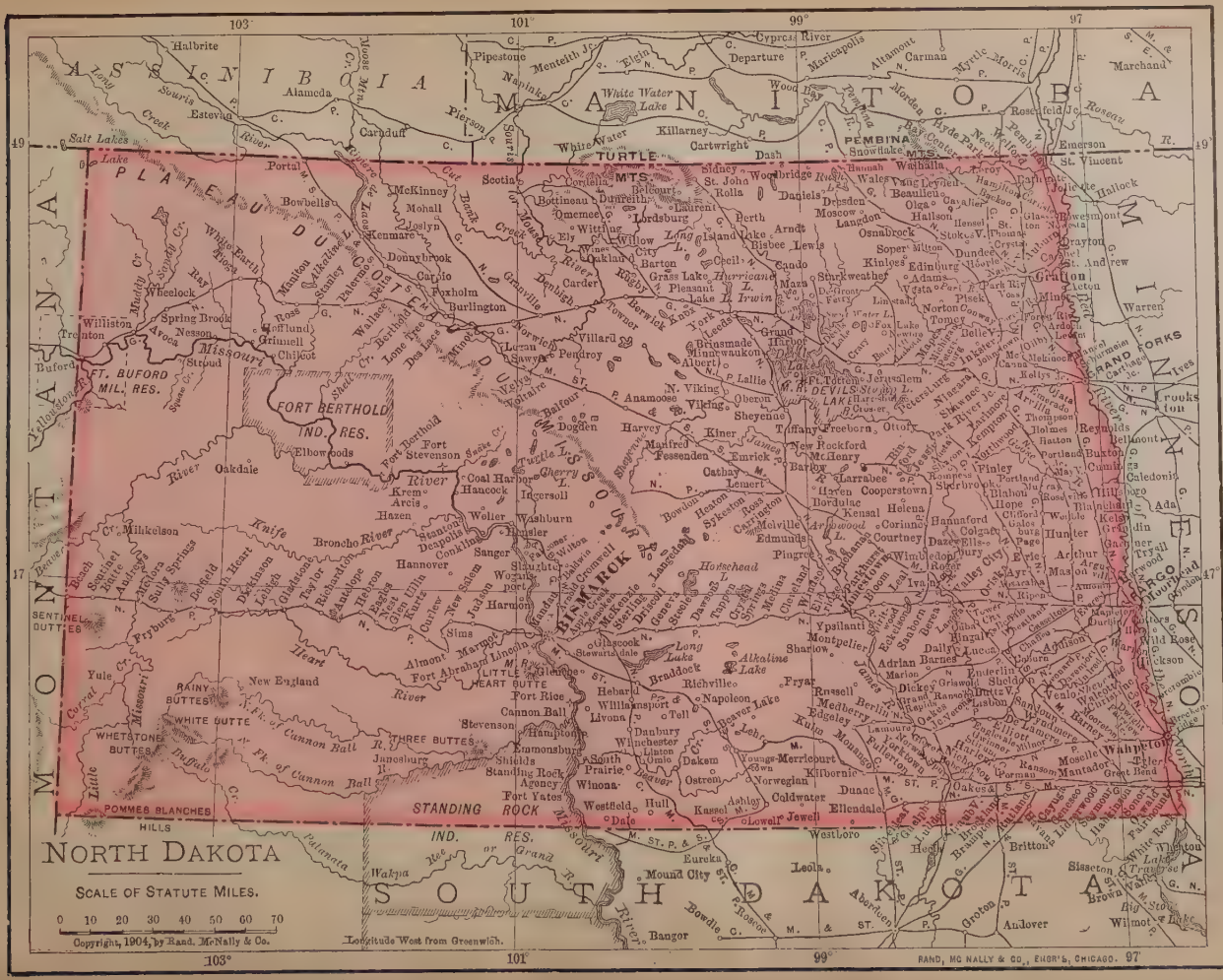
Railways.—The first railway—the Northern Pacific—entered the State January 2, 1872; miles of road completed that year, 272. Miles of road January 1, 1892, 2,218. June 30, 1896, 2,518.56 miles, June 30, 1900, 2,731.22, being 3.89 miles of line to each 100 square miles, 85.89 miles to each 10,000 inhabitants. During certain seasons the Missouri and Red rivers afford important highways for commerce and trade.

Education.—Public school enrollment, 1899-00, 87,130; private, 1893-4, 400; expenditure, $1,440,892; school age, 6-20; compulsory, 8-14. Public high schools, 1899-00, 27, private secondary, 2. Among the educational institutions are the University of North Dakota at Grand Forks, opened 1884; State Normal Schools at Mayville and Valley City; State Agricultural College, Fargo; School for the Deaf and Dumb, Devil's Lake. Provision has been made for a School of Mines, Grand Forks; Industrial School and School for Manual Training, Ellendale; School of Forestry, Bottineau; School of Science, Wahpeton; Reform School, Mandan.

Political.—State elections biennial. State, congressional, and presidential elections, Tuesday after first Monday in November. Number of Senators, 31; Representatives, 62; term of Senators, 4 years; Representatives, 2 years; sessions, biennial, in odd-numbered years; meets first Tuesday after first Monday in January; limit of session, 60 days. Number of electoral votes, 3. Voters must be citizens or declared intention, or civilized Indians, residents of State 1 year, of county 6 months, of precinct 90 days; registration required in cities of 3,000 or over. Idiots, insane, convicts, and U. S. soldiers excluded. Women may vote on school matters.

Legal Holidays.—January 1, February 12 and 22, May 30, July 4, Arbor Day, Thanksgiving, and public fast, December 25, and general State or National election.

Legal.—Statutes of limitation: Judgments, 10 years; contracts, obligations, liability, 6; redemption of tax sales, 3 years. Legal interest rate, 7 per cent; by contract, 12.


NORTH DAKOTA
SCALE OF STATUTE MILES.
0 10 20 30 40 50 60 70
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Longitude West from Greenwich.
RAND, MC NALLY & CO., ENGR'S, CHICAGO.
103°
101°
99°
97°
49°
47°
MONTANA
SOUTH DAKOTA
MINNESOTA
MANITOBA
ASSINIBOIA
PLATEAU DU COTEAU
TURTLE MTS.
PEMBINA MTS.
PEMBINA
FORT BERTHOLD IND. RES.
FT. BUFORD MIL. RES.
STANDING ROCK IND. RES.
BISMARCK
GRAND FORKS
DEVILS LAKE
SENTINEL BUTTES
RAINY BUTTES
WHITE BUTTE
WHETSTONE BUTTES
THREE BUTTES
POMMES BLANCHES HILLS
Missouri R.
Souris R.
Red R.
Heart R.
Knife R.
Little Missouri R.
Pk. of Cannon Ball R.
Yellowstone R.
Lake Souris
Salt Lakes
White Water Lake
Long Lake
Alkaline Lake
Devils Lake
Stump Lake
Lake Irwin
Lake Darling
Lake Metigoshe
Lake Upsilanti
Lake Tetonka
Lake Oscar
Lake Ilo
Lake Ashtabula
Lake Ardoch
Lake Agassiz
Lake Traverse
Big Stone Lake
Halbrite
Pipestone
Menteith Jc.
Elgin
Napinka
Cypress River
Departure
Mariapolis
Altamont
Carman
Myrtle
Morris
Marchand
Alameda
Estevan
Carnduff
Killarney
Cartwright
Dash
Snowflake
Emerson
St. Vincent
Portal
Scotia
Sidney
St. John
Rolla
Hannah
Wales
Walhalla
Pembina
Gretton
Bowbells
Kenmare
Mohall
Lostwell
Donnybrook
Carpio
Foxholm
Burlington
Minot
Sawyer
Velva
Voltaire
Balfour
Anamoose
Harvey
Kiner
Tiffany
Freeborn
Ottofy
Wheelock
Williston
Trenton
Spring Brook
Nesson
Grinnell
Chigot
Stroud
Buford
Oakdale
Elbowoods
Fort Stevenson
Coal Harbor
Krem
Arcis
Hancock
Ingersoll
Hazen
Weller
Washburn
Stanton
Deapolis
Conklin
Sanger
Hannover
Wilton
Wing
Wilton
Wilton
Wilton

MONTANA.

Mŏn-ta'-nah. "Stubtoe" or "Treasure" State.

Spanish—"Mountainous."

Historical.—First explored by Lewis and Clarke, 1804-6. Trading post established on Yellowstone River, 1809; Fort Union built by American Fur Company, 1827; Fort Benton, 1846. First settlers located, 1862. Territory organized, 1864. Admitted to Union, November 8, 1889.

Area, 146,080 square miles; land, 145,310; water, 770; average length, east to west, over 535 miles; breadth, 275. Counties, 24. Area of forest reserves, 4,348,800 acres.

Physical Features.—Two natural divisions: Western Montana, traversed by Rocky Mountains, contains many broad, fertile valleys and basins; Eastern Montana comprises plateaus and undulating plains. Elevation of plains, 2,000 feet above sea level; mountain valleys, 3,000 to 5,000 feet. Highest altitude, Mount Douglas, 11,300 feet. Chief rivers, Yellowstone and Missouri.

Climate dry, healthful, exhilarating; sunshine almost continuous. Winters generally mild, but subject to extreme and rapid changes. Snowfall light except on mountains. Mean annual rainfall, Helena, 13 inches; temperature, 43 deg.; highest, 103; lowest, 42 below.

Agriculture, etc.—Estimated area of tillable lands, 30,000,000 acres; under cultivation, 454,355. Irrigation necessary. Cereals, vegetables, and fruits flourish. Wheat, in 1900, 26.6 bushels per acre, oats, 39.00; barley, 38.8; rye, 29.16; potatoes, 134.00. Value of wheat crop, 1900, $1,177,277; oats, $1,078,869; hay, $5,138,725; potatoes, $339,547. Live stock second only to mining in importance. In number and value of sheep and extent of wool clip surpassed by Oregon alone. Cattle, 1900, 968,337, value $25,362,016, sheep, 6,170,483, $18,165,404, wool clip, 1901, 30,553,990 pounds.

Horticulture receiving increased attention. Bitter Root Valley leading fruit district in State. Fruit trees in Ravelli County, chief center of industry, 1895, 265,225; yield, 29,894 bushels of apples, plums, prunes, apricots, peaches, pears. Missoula and Flathead valleys next.

Manufactures.—Natural advantages great. Industries increasing in number and importance. In 1900, 1,080 establishments reported invested capital, $40,945,846, value of products, $57,075,824; increase in decade, 936 per cent; number employed, 10,680.

Minerals.—Mineral resources inexhaustible. Mining chief industry. In 1900, Montana fourth in lead, fifth in gold, second in silver. Leads all other States in production of copper. Gold mined, 1900, 277,266 ounces, value $4,698,000, silver, 14,195,400 ounces, $18,353,648; copper, 270,738,489 pounds, over $44,000,000; lead smelted, 1899, 10,277 short tons; coal output, 1900, 1,661,775 tons, $2,713,707; value of limestone, $141,093.

Population, 1870, 20,595; 1890, 132,159; 1900, 243,329: Male, 149,842; female, 93,487; native, 176,262; foreign, 67,067, white, 226,283, colored, 17,046; African, 1,523; Chinese, 1,739, Japanese, 2,441; Indians, 11,343.

Cities.—*Butte*, most important railway and business center in State. "The greatest mining camp in the world;" population, 1900, 30,470. *Helena*, capital, third city in size; seat of United States assay office; population, 10,770. *Great Falls*, second city; many flourishing industries, population, 14,930. *Anaconda*, seat of largest copper smelting and refining works in the world; population, 9,453. *Missoula*, population, 4,366.

Railways.—First railroad entered Territory, March, 1880; number of miles completed, 1880, 106, 1890, 2,195; July, 1900, 3,010.32.

Education.—Public school system established 1872. Number of districts, 1898, 669; enrollment, 1900, 43,950; expenditure, $854,069. School age, 6-21; compulsory school age, 8-14. State University, Missoula; Agricultural College, Bozeman; Indian School, Fort Shaw; School of Mines, Butte; State Normal, Dillon.

Political.—State elections biennial. Senators, 23; Representatives, 68; sessions biennial, first Monday in January; limit, 60 days. Electoral votes, 3. Voters must be citizens, residents of State 1 year, county 6 months, town and precinct 30 days; registration required.

Legal Holidays.—January 1, February 22, Arbor Day, May 30, July 4, first Monday in September, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, 10 years; contracts, 8; open accounts, 3; redemption of tax sales, 3; legal interest, 10 per cent; by contract, any.

IDAHO.

Ī'-dah-ho.

Indian—"Gem of the mountains."

Historical.—Formed part of Oregon Country, acquired 1792-1819. Cœur d'Alene Mission established 1842. First permanent settlements, 1860, when gold was discovered on Oro Fino Creek. Originally a part of Oregon Territory, and later of Washington Territory. Idaho Territory, including what is now Montana and part of Wyoming, organized 1863; present limits established 1868. State Constitution adopted 1889. Admitted into the Union, July 3, 1890. Forty-third State.

Area.—Total area, 84,800 square miles; land, 84,290; water, 510; length of western border, 485 miles; Wyoming border, 130 miles; southern border, 300 miles; northern, 45 miles. Counties, 21.

Physical Features.—Country a vast plateau. Surface diversified by numerous mountain ranges, broad and fertile hills and valleys, and extensive prairies. Altitude varies from 680 feet at Lewiston, to 13,691 feet in Teton Mountains; mean elevation of State, 4,700 feet. Snake River drains two-thirds the area of the State. Other large rivers furnish abundance of water for irrigating purposes. Great Shoshone, American, and Salmon Falls notable natural features. Estimated area of timber lands, 10,000,000 acres; pine predominates.

Climate invigorating and healthful. Intensity of heat and cold markedly influenced by the dry, rarefied atmosphere. Mean annual rainfall at Boise, 13.1 inches; temperature, 50.9 deg.; highest, 107 deg.; lowest, 28 deg. below.

Agriculture.—Soils of Idaho among the most productive in the world. In southern section irrigation generally necessary to successful plant growth. Irrigated area under cultivation, 315,000 acres. Southeastern section best suited to general farming. Products, 1900: Wheat, 3,104,629 bushels; oats, 1,349,845 bushels; hay, 659,103 tons; potatoes, 684,080 bushels. Culture of sugar beet successful.

Horticulture an important pursuit; rapidly extending in commercial importance. Fruits unexcelled in quality and flavor; all deciduous varieties of temperate zone grown. Area under orchards, 1890, 2,640 acres; 1898, 30,686. Amount of sales, 1897, $289,815; 1898, $500 130.

Live Stock industry important. Estimated area of grazing land, 25,000,000 acres. Value of farm animals, 1900, $51,724,113; wool clip, 1901, 20,336,250 pounds.

Minerals.—Mining the chief industry. Value of ores produced since 1860, nearly $200,000,000. Cour d'Alene district the richest. State leads in production of lead, ranks ninth in gold, and fourth in silver. Output of four leading metals, 1900, about $14,000,000; gold, 83,433 fine ounces, value $1,724,700; silver, 6,429,100 ounces, value $3,986,042. Output of lead, 85,444 short tons; copper, 290,162 pounds.

Population, 1890, 84,385; 1900, 161,722: Male, 93,367; female, 68,405; native, 137,168; foreign, 24,604; white, 154,495; negroes, 293; Chinese, 1,467; Japanese, 1,291; Indians, 4,226.

Cities.—*Boise*, capital and chief city; in vicinity of rich gold and silver mines; seat of United States assay office; population, 1900, 5,957. *Pocatello*, 4,046; *Moscow*, 2,484; *Lewiston*, on Snake River, important trading center; population, 2,425. *Wallace*, 2,265. *Montpelier*, outlet for Bear Lake Valley; population, 1,444.

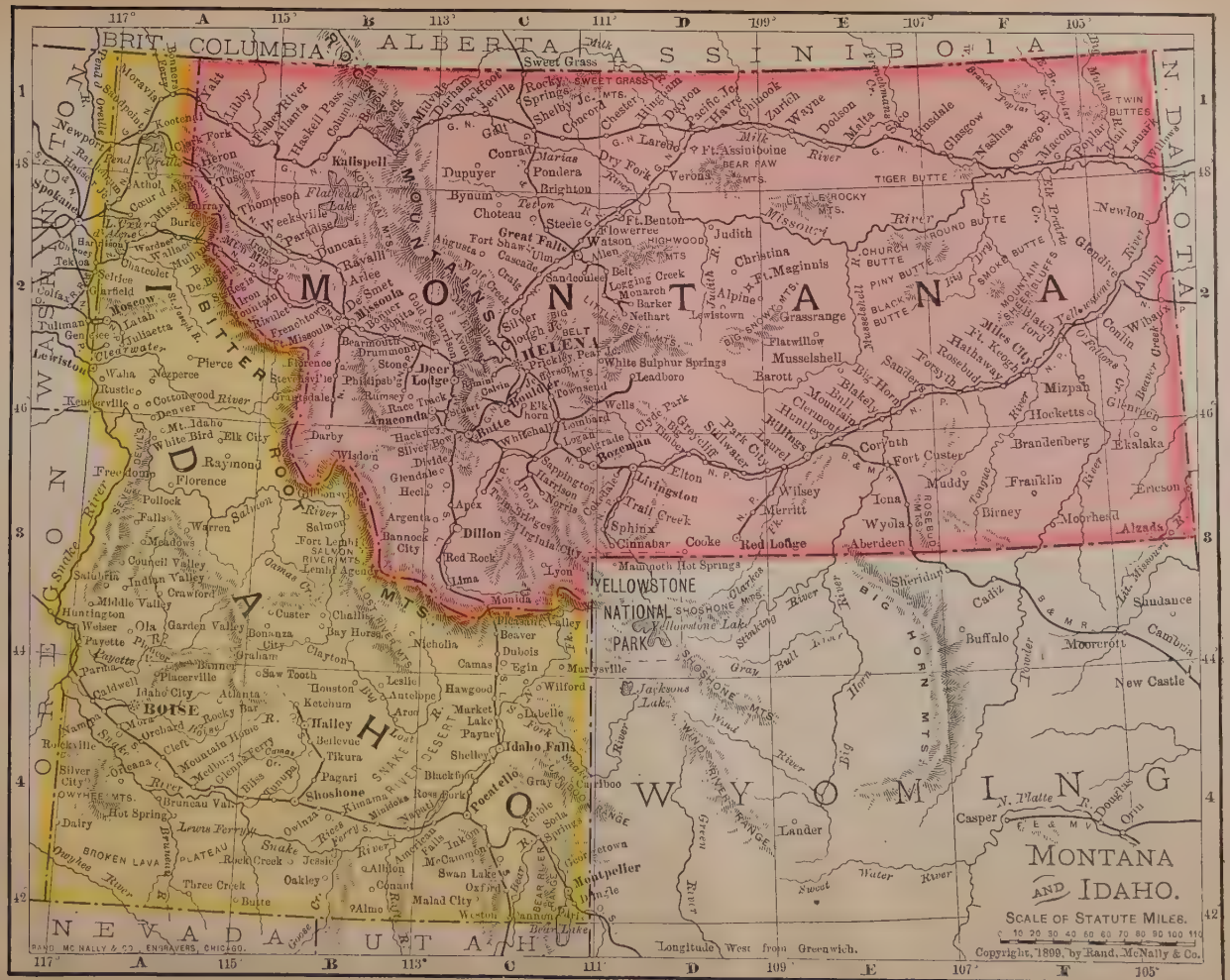
Railways.—Miles in operation, 1880, 206; 1885, 794; 1890, 946; July, 1900, 1,261.23 miles.

Education,—Public school enrollment, 1899-00, 43,780; expenditure, $400,043; school age, 5-21; compulsory school age, 8-14; text-books furnished. University of Idaho at Moscow; Normal Schools at Lewiston and Albion.

Political.—State elections, biennial. Number of Senators, 21; Representatives, 49; term, 2 years; sessions, biennial in odd-numbered years, meets first Monday after January 1st; limit of session, 60 days. Electoral votes, 3. Voters must be actual citizens, residents of State 6 months and of county 3 months, town 30 days, precinct 10 days; registration required. Women may vote.

Legal Holidays.—January 1, February 22, Arbor Day, July 4, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, 6 years; instruments in writing, 5; contracts not in writing, 4; redemption of tax sales, 2 years. Legal interest rate, 7 per cent; by contract, 12.


BRIT. COLUMBIA
ALBERTA
ASSINIBOIA
N. DAKOTA
MONTANA
IDAHO
WYOMING
NEVADA
UTAH
YELLOWSTONE NATIONAL PARK
MONTANA AND IDAHO.
SCALE OF STATUTE MILES.
Longitude West from Greenwich.
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WYOMING. Wī-ō'-ming.

Indian—Maughwanwame—signifies "Broad Valley."

Historical.—Territory taken mainly from Louisiana purchase of 1803; in part from Mexican cessions, and from territory defined by treaty with Great Britain 1846. Named for the historic Wyoming Valley of Pennsylvania. Visited by Spanish adventurers and Jesuit missionaries about the middle of the sixteenth century. Territory explored by Frémont about 1842; Cheyenne settled 1867. Territory organized from portions of Dakota, Idaho, and Utah, July 25, 1868. State Constitution adopted 1889; admitted into the Union July 10, 1890, the forty-fourth State to enter.

Area.—Total area, 97,890 square miles; land, 97,575 square miles or 62,448,000 acres; water, 315 square miles; length, 350 miles; breadth, 275. Total area of public lands subject to entry, 43,358,169 acres; unsurveyed, 5,163,858. Reserved land, 8,046,226 acres.

Physical Features.—Surface greatly diversified; largely an elevated plateau crossed by ranges of Rocky Mountain system; mean elevation not less than 6,400 feet; highest altitude, Frémont's Peak, 13,790 feet; lowest about 500 feet above sea level. Big Horn Mountains in north; Wind River and Shoshone in west; Laramie and Medicine Bow in the southeast. Southwest drained by Green River; northwest by Yellowstone and Snake rivers; north by Big Horn; southeast by North Platte and Laramie rivers. Rivers not valuable for navigation, but furnish power and water for irrigation. Numerous small lakes in western part of State. Wyoming contains an unusual number of mineral springs.

Yellowstone National Park.—A region, mainly in Wyoming, set apart as a public pleasure ground and game preserve by act of Congress 1872. First visited 1806. Explorations made under Washburne 1870, more extensive under Hayden 1871. Great Continental Divide crosses southern part of Park. Area about 5,500 square miles. Surface an elevated plateau in center of Rocky Mountain system, elevation 7,000-11,000 feet. Large tracts are covered with dense forests. Region has been one of recent remarkable volcanic activity. Park is famous for its scenery; noted for its extensive geysers, boiling springs, cañons, etc. Embraces headwaters of Yellowstone—branch of Missouri—and Snake—branch of Columbia River. Besides Yellowstone Lake, near center of Park, elevation 7,738 feet, are Shoshone, Lewis, and Heart lakes. Grand Cañon and Falls of Yellowstone among its most interesting features. Highest elevations, Mt. Sheridan, 10,385 feet, and Mt. Washburne, 10,346 feet. Within the Park are found the larger game—buffalo, elk, antelope, and bear.

Forests, with exception of high plains in Yellowstone Park, usually confined to mountains; area about 16,000,000 acres distributed throughout the State. Best timber found on Big Horn, Laramie Range, Medicine Bow, and Sierra Madre Mountains; timber limit about 10,000 feet above sea level. Yellow and white pine and white spruce are the principal woods. Timber suitable for lumber and railroad ties. Public forests comprise 3,305,600 acres; Yellowstone National Park Timber Land Reserve, 1,239,040 acres; Big Horn Forest, 1,180,800 acres; Teton Forest, 829,440 acres; Crow Creek Forest, 56,320 acres.

Climate in general mild and healthful. Atmosphere dry, clear, and rare; summers short and cool; winters long and severe in the higher altitudes; temperature varies with elevation. Rainfall slight; mean annual rainfall at Cheyenne, 12.2 inches; mean annual temperature, 44.9 deg.; highest, 100 deg.; lowest, 38 deg. below.

Agriculture.—Estimated area of land capable of cultivation under irrigation, 12,000,000 to 15,000,000 acres. Agriculture increasing as irrigation is extended; Wyoming surpasses all other States in number of available streams. A large proportion of the alkali soil, especially that of the sagebrush and grease wood wastes, produces abundantly under irrigation. Below an altitude of 7,500 feet, cereals—except Indian corn—vegetables, tame grasses, and other products of Western and Central States may be grown; in Frémont County, at an altitude of 5,300 feet, small berries and grapes grow quite readily. The valleys of the large streams, particularly the Platte, afford the best natural conditions for farming. Promising industries are the raising of sugar beets, tobacco, and small fruits. Land under cultivation, 1895, 579,000 acres. Acreage and value of productions, 1900: Hay, 293,718 acres, yield 493,446 tons, value $5,602,156; potato crop, 3,921 acres, 388,179 bushels, value $263,962; oats, 18,429 acres, 630,272 bushels, $296,228; corn, 2,403 acres, 81,702 bushels, $49,021; wheat, 20,819 acres, 366,414 bushels, $278,475.

Live Stock.—State affords a large amount of natural grazing; estimated area, 18,000,000 acres. Stock-raising the oldest and most profitable industry. Cattle the most important, but great progress has been made in quality and number of sheep and horses. Number and value of farm animals, June, 1900: Horses, 135,543, value $3,225,196; mules, 1,277, $51,609; sheep, 5,099,613, $16,310,096; milch cows, 18,272, $720,693; other cattle, 669,012, $18,672,498; swine, 15,471, $78,145. Wool clip, washed and unwashed, 1901, 26,856,420 pounds; scoured, 8,862,619 pounds.

Fish and Game.—From 1890 to 1896, 3,823,000 young trout were distributed in waters of State, 1,316,000 having been supplied by hatchery at Laramie; branch hatcheries at Sheridan and Sundance. Wyoming celebrated for large game—moose, elk, deer, antelope, mountain sheep, goats, black, brown, cinnamon, and grizzly bear. Stringent laws exist for the protection of the game.

Manufactures.—Number of establishments, 1900, 334; value of products, $4,301,240. Ranks fifteenth in production of coke, output, 1900, 15,630 short tons, value $38,510; railroad shop products, $1,169,813; lumber and timber products, $831,558; flouring mills, $215,447; saddlery and harness, $121,711; printing and publishing, $157,789; carpentering, $445,000; cigars, 807,310.

Minerals.—Mineral resources extensive but largely undeveloped. Valuable coal deposits underlie about 13,000,000 acres; chiefly in Sweetwater, Weston, Carbon, Uinta, Sheridan, and Converse counties; coal mined extensively along line of Union Pacific Railway; yield steadily increasing, production, 1900, 4,014,602 tons. State has a large extent of oil fields. Output of petroleum restricted owing to distance of markets; yield, 1900, 5,450 barrels, value $38,150. Gold mined, 1900, 1,655 fine ounces, value $34,200. Value of sandstone quarried, $27,671. Iron industry in connection with native coal promising. Natural soap beds exist northwest of Newcastle. Extensive and valuable soda lakes found in Albany, Carbon, and Natrona counties; asbestos deposits are being developed. Gypsum deposits are important; marble found in Converse County. Moss agates of fine quality found; opals, amethysts, jasper, and chalcedonies mined for specimens; agatized wood plentiful. Warm and cold mineral springs numerous.

Population.—Wyoming ranked forty-seventh in population from 1870 to 1890; fiftieth in 1900. Total population, 1870, 9,118, 1880, 20,739; 1890, 60,705; 1900, 92,531: Male, 58,184; female, 34,347; native, 76,116; foreign, 17,415; white, 89,051; colored, 3,480, Africans, 940; Chinese, 461; Indians, 1,686.

Cities.—*Cheyenne*, capital, prominent railway center and headquarters of great cattle companies; population, 1900, 14,087; increase during decade, 2,397. *Laramie*, leading railway town and trading center for ranchmen, lumbermen, and miners; population, 8,207. *Rock Springs*, center of most productive coal district in Rocky Mountains; population, 4,363. *Rawlins*, a thriving station on Union Pacific Railway; population, 2,317. *Evanston*, flourishing town in Bear River Valley; population, 2,110.

Railways.—Number of miles of railway in operation in 1867, 82; 1870 and 1875, 459; 1880, 512; 1885, 616; 1890, 1,002; July, 1900, 1,228.63; 1.26 miles per 100 square miles; 132.82 per 1,000 inhabitants.

Education.—Public school enrollment, 1900, 19,740; private, 1894-5, 175; expenditure, $253,551, school age, 6-21, compulsory school age, 7-16. Public high schools, 7, private secondary schools, 1. State University, Laramie; Agricultural College, Lander.

Political.—State elections biennial. State, congressional, and presidential elections, Tuesday after first Monday in November; number of Senators, 19; Representatives, 38; sessions biennial, in odd-numbered years; meets January 10; limit of session, 40 days; term of Senators, 4 years; Representatives, 2 years; number of electoral votes, 3. Voters must be citizens or declared intention, residents of State 1 year, county 60 days; registration required; ballot reform. Idiots, insane, convicts, unless pardoned, U. S. soldiers, persons unable to read, excluded. Women hold equal right with men to vote and hold office since 1870.

Legal Holidays.—January 1, February 22, May 30, July 4, Labor Day, general election day, Thanksgiving, December 25, Arbor Day.

Legal.—Statutes of limitation: Judgments, 5 years; unwritten contracts, 8; written, 5; redemption of tax sales, 3 years. Legal interest rate, 8 per cent; by contract, 12.

WYOMING.
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60 70
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YELLOWSTONE PARK
BIG HORN MTS.
BIG HORN BASIN
BIG HORN RANGE
WIND RIVER MTS.
WIND RIVER RANGE
GROS VENTRE RANGE
GROS VENTRE MTS.
TETON RANGE
SNAKE RIVER RANGE
SNAKE RIVER
WIND RIVER
BIG HORN RIVER
BIG HORN MOUNTAINS
SAND HILLS
LARAMIE MTS.
LARAMIE RANGE
LARAMIE PLAINS
LARAMIE
ROCK CREEK
SEMINOLE MTS.
SWEETWATER MTS.
SWEETWATER RIVER
SWEETWATER
RATTLESNAKE RANGE
ATLANTIC PEAK
ATLANTIC CITY
LEUCITE HILLS
TABERNACLE BUTTE
LABARGE MT.
WYOMING PEAK
MT. WAGNER
FREMONT PEAK
MT. LEDY
MT. HUMPHREYS
MT. DOANE
MT. SHOSHONE
MT. STURGIS
MT. CHITTENDEN
MT. BURLINGTON
MT. OSCAR
MT. HEART
MT. STANDING
MT. LOWELL
MT. STEVENS
MT. WASHBURN
MT. STAINTHORP
MT. LANGFORD
MT. HANCOCK
BISON PEAK
JACKSON LAKE
JENNY LAKE
LEIGH LAKE
SHADOW LAKE
STRING LAKE
LEWIS LAKE
YELLOWSTONE LAKE
SNAKE R.
SNAKE RIVER
JACKSON
WILSON
TETON
KELLY
MOOSE
ALTA
DRUMMOND
DUBOIS
LANDER
FORT WASHAKIE
ARAPAHOE
RIVERTON
THERMOPOLIS
HOT SPRINGS
WORLAND
BASIN
GREYBULL
OTTO
BURLINGTON
MEETEETSE
CODY
POWELL
BYRON
GARLAND
LOVELL
KIRBY
BASIN
BONANZA
TENSLEEP
HYATTVILLE
BUFFALO
KAYCEE
MIDWEST
SHAWNEE
EDGERTON
MIDDLE BUTTE
PUMPKIN BUTTE
POWDER RIVER
CASPER
EVANSVILLE
MILLS
ALCOVA
SARATOGA
ENCAMPMENT
RIVERSIDE
HANNA
ELMO
DIXON
BAGGS
SAVERY
DIAMONDVILLE
FORT BRIDGER
LYMAN
MILLBURNE
EVANSTON
ALMY
AURORA
WOODRUFF
BORDER
CHUGWATER
WHEATLAND
GUERNSEY
HUNTLEY
HENRY
TORRINGTON
LINGLE
FT. LARAMIE
HARRISBURG
MORRILL
BRIDGEPORT
MINATARE
LYMAN
HENDERSON
BRUSH
FT. MORGAN
LOCHBUIE
HUDSON
LUPTON
ARAPAHOE
KIOWA
BENNETT
STRASBURG
BYERS
DEER TRAIL
AGATE
LIMON
HUGO
GENOA
KIT CARSON
CHEYENNE WELLS
CHEYENNE
CHEYENNE R.
LITTLE MISSOURI R.
BELLE FOURCHE R.
BELLE FOURCHE
BLACK HILLS
SPEARFISH
DEADWOOD
LEAD
CENTRAL CITY
SUNDANCE
HULETT
ALVA
ORIN
OSAGE
NEWCASTLE
UPTON
MORAN
MOORCROFT
SUNDANCE
HULETT
ALVA
ORIN
OSAGE
NEWCASTLE
UPTON
MORAN
MOORCROFT
MONTANA
IDAHO
UTAH
COLORADO
NEBRASKA
SOUTH DAKOTA
111°
109°
107°
105°
45°
43°
41°

UTAH. Yoo'tah.

Indian word—meaning "Mountain Home."

Historical.—Country ceded to United States by Mexico, 1848. Earliest explorations made by Spaniards, 1540. Explored by Captain James Bridger in neighborhood of Great Salt Lake, 1824-5—earliest recorded discovery of lake. Visited by Frémont, 1843; settlement of territory due to Frémont's published account of exploration. First settlements by Mormons under Brigham Young at Salt Lake City, 1847. In 1849 Mormons attempted to organize State of "Deseret," but Congress refused to recognize the proposed sovereignty. Territory of Utah created by Congress September 9, 1850. Mountain Meadow massacre of Gentile settlers occurred 1857. Enabling Act passed 1894; became a State July 16, 1896; the forty-fifth admitted to the Union.

Area.—Total area, 84,970 square miles, or 54,380,800 acres; land, 82,190 square miles; water, 2,780; average length, 345 miles, breadth, 275. Counties, 27. Area of public lands subject to entry, 1900, 42,967,451 acres; surveyed, 10,019,262 acres. Land office at Salt Lake City.

Physical Features.—State divided into eastern and western sections by Wasatch Mountains, which contain several peaks exceeding 13,000 feet in height. Highest altitude, Mt. Emmons, 13,694 feet. Utah is a region of snow-clad mountains and broad, beautiful valleys; elevation of valleys, 2,700 to 7,000 feet; average elevation of State, 6,100 feet. West of Wasatch Range is the Great Basin, chiefly desert, which contains Great Salt Lake, elevation 4,200 feet, area about 2,500 square miles, with an extreme depth of 60 feet; Lake Sevier, elevation 1,600 feet, area 150 square miles; Utah and Bear (fresh water) lakes, natural reservoirs with surface areas of 125 and 150 square miles. Region east of Wasatch drained by Colorado River and tributaries. Medicinal springs, varying in temperature from 98 to 128 deg., are numerous; several have become notable health resorts. Utah famous for its picturesque scenery.

Climate varying; sudden and extreme changes not infrequent. Range of temperature between summer and winter and day and night very great. Winters usually mild; summers dry and warm. Rainfall scanty. Mean annual rainfall at Salt Lake City, 16.2 inches; temperature, 51.6 deg.; highest, 102 deg.; lowest, 20 deg. below.

Agriculture.—Total area reclaimable by irrigation, 3,500,000 acres; improved land—land owned by farmers—806,650 acres. Present system of irrigation capable of developing only 200,000 additional acres. Artesian wells employed to irrigate gardens, orchards, and vineyards. Principal cereals, wheat and oats; largest area devoted to hay. Sugar beet successfully grown; culture profitable and steadily advancing; area devoted to industry, 1899, 7,800 acres. Sericulture an established and growing pursuit; mulberry trees numerous, number increasing yearly. Number of farms, 1894, 19,816; free of encumbrance, 17,684. Area under cultivation, 467,162 acres; irrigated, 417,455 acres. Crops, 1900: Barley, 5,964 acres, yield 217,686 bushels, value $119,727; rye, 3,383 acres, 59,202 bushels, $30,785; wheat 176,395 acres, 3,697,106 bushels, value $2,033,408; oats, 25,577 acres, 918,214 bushels, value $404,014; corn, 8,459 acres, 169,184 bushels, $106,583; hay, 192,398 acres, 509,855 tons, $4,053,347; potatoes, 5,500 acres, 649,000 bushels, $311,520; lucerne, 1894, 163,544 acres, 462,459 tons, $1,851,639, cotton, 1898, 155 acres, 61,500 pounds, total value $4,305. Apiculture extensive. Number stands of bees, 1894, 28,517; honey produced, 1,102,121 pounds.

Horticulture.—Fruit-growing a promising industry. All fruits produced in temperate zone profitably grown; in southern counties, figs, pomegranates, almonds, and other semi-tropical fruits flourish. Orchard products, 1894: Apples, 4,543 acres, 377,935 bushels, value $146,764; pears, 524 acres, 27,261 bushels, $18,832; peaches, 1,686 acres, 154,772 bushels, $82,107; plums, 754 acres, 36,814 bushels, $19,835; apricots, 351 acres, 21,234 bushels, $10,272; small fruits, 747 acres, 12,253 bushels, $62,444; grapes, 578 acres, 1,046,768 pounds, $37,263. Dried fruits: Apples, 337,140 pounds; peaches, 375,446; apricots, 50,358; plums, 97,479; pears, 5,879.

Live Stock.—Cattle, horses, and sheep reared in large numbers; dairy interests prominent and rapidly increasing in value. Butter made, 1894, 3,441,732 pounds; cheese, 820,747 pounds. Number and value of farm animals, June, 1900: Horses, 115,884, value $3,396,313; mules, 2,116, $58,850; swine, 65,732, $293,115, stock cattle, 277,785, $5,115,477; milch cows, 65,905, $2,037,367. Wool grown is of superior quality, much attention having been given to the improvement of breeds; total amount of clip, washed and unwashed, 1901, 16,828,044 pounds; scoured, 6,058,096 pounds.

Fisheries of Utah Lake most important in State; principal catch black bass and carp, introduced a number of years ago; in 1895, 30,000 pounds of bass taken for market. Waters of Bear and Panguitch lakes and Ogden and Weber rivers next in importance; suckers, trout, and whitefish principal fish taken. Mountain streams abound in trout. Total value of catch, 1895, $37,479; amount of fish taken—exclusive of black bass—1,200,124 pounds; carp, 133,324 pounds; suckers, 962,400 pounds, value $20,649; trout, 85,800 pounds; whitefish, 18,600 pounds.

Manufactures.—Number of industrial establishments in operation, 1900, 1,400; employes, 7,355; wages paid, $3,954,535; capital invested, $14,650,948; value of products, $21,215,783. Cider, 1894, 69,098 gallons, vinegar, 31,049; sorghum syrup, 90,201; wine, 47,246 gallons, value $30,744. Value of brick and tile, 1900, $227,621. Coke, with Colorado, 618,755 tons. Portland cement, 1894, 990,324 barrels. Output of Lehi and Ogden beet-sugar factories, 1898, 14,000,000 pounds, value $645,568. Beet sugar and molasses, 1900, $1,037,355; flouring mill products, $1,829,840; railway shop construction, $1,306,591; output of dairy factories, $713,889; malt liquors, $432,835; woolen goods, $222,343.

Minerals.—Gold, silver, lead, and copper the chief minerals. Value of silver mined in Utah, 1877 to 1900, inclusive, $138,329,935; gold, $19,698,183, copper, $11,598,853. In 1900, Utah ranked third in production and value of silver, third in production of lead ore, fourth (of the Western States) in copper, and sixth in salt. Extensive deposits of salt around Great Salt Lake and at Nephi and Salina; also large deposits of rock salt. Valuable beds of marble are found at Springville, Utah County, excellent sulphur at Black Rock, Beaver County. Vast stores of building stone in many varieties exist. Total value of gold, silver, lead, and copper, 1900, $16,011,291; 1898, $9,277,543. Gold mined, 1900, 192,155 ounces, value $3,972,200. silver, 9,267,600 ounces, commercial value, $5,745,912; lead, 48,044 tons; copper, 18,354,726 pounds. Area of available coal, 2,000 square miles. Number of mines, 1896, 15, production, 1900, 1,147,027 tons, $1,447,750. Annual coke shipments, about 35,000 tons. Salt produced, 1900, 249,128 barrels, $151,662; asphaltum, 1896, 80,503 tons, $577,563; limestone, 1900, $12,749; sandstone, $66,733; granite, $2,170; value of total stone products, $81,652.

Population.—State ranked thirty-fifth in population in 1850, fortieth in 1890, forty-third in 1900. Total population, 1850, 11,380; 1890, 210,779. Population, 1900, 276,749, an increase of 31 per cent since 1890: Males, 141,687; females, 135,062; native, 222,972; foreign, 53,777; white, 272,465; colored, 4,284; Africans, 672; Chinese, 572; Japanese, 417; Indians, 2,623.

Cities.—*Salt Lake City*, capital and metropolis, founded by Mormons under Brigham Young in 1847; has a number of woolen and grist mills, cutlery and pottery manufactories; population, 1900, 53,531. *Ogden*, important railroad, commercial, and manufacturing center; population, 16,313. *Provo City*, manufacturing town and seat of Insane Asylum; population, 6,185. *Logan*, center of important educational interests; population, 5,451. *Park City*, one of the most prominent mining centers in Utah; population, 3,759.

Railways.—Union Pacific Railway completed to Ogden, March 3, 1869. Number of miles in operation, 1870, 257; 1875, 515; 1880, 842, 1885, 1,138; 1890, 1,265; July, 1900, 1,547.42 miles.

Education.—Public school enrollment 1899-00, 89,810; private, 1,728; expenditure, $1,073,586; school age, 6-18; compulsory, 8-14. Educational institutions: University of Utah, Salt Lake City; Agricultural College, Logan: School for Deaf, Dumb, and Blind, and State Industrial School, Ogden.

Political.—General elections biennial. State, congressional, and national elections Tuesday after first Monday in November. Number of Senators, 18; Representatives, 45; term, 2 years; sessions biennial, in odd-numbered years, meeting first Monday in January; limit of session, 60 days. Voters must be citizens or declared intention, residents of State 1 year, county 4 months, town 60 days; registration required; women are qualified voters; idiots, insane, and those guilty of treason disqualified.

Legal Holidays.—January 1, February 22, May 30, July 4 and 24, first Monday in September, Thanksgiving and fast days, and December 25.

Legal.—Statutes of limitation: Judgments, 8 years; written contracts, 6; unwritten contracts, open accounts, 4. Redemption of taxes, 4 years. Legal interest rate, 8 per cent; by contract, no limit.

UTAH.
SCALE OF STATUTE MILES.
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I D A H O
W Y O M I N G
C O L O R A D O
N E V A D A
A R I Z O N A
GREAT SALT LAKE
GREAT AMERICAN DESERT
WASATCH MTS.
UINTA MTS.
WHITE MTS.
WHITE ROCKS
Bear Lake
Utah Lake
Sevier Lake
Little Salt Lake
Escalante Valley
Sevier River Desert
Snake Valley
Sage Brush Valley
Wah Wah Valley
Escalante Desert
Virgin River
Kanab Valley
Johnson Valley
Kimball Wash
Pink Cliffs
Straight Cliffs
Kaiparowits Plateau
Aquarius Plateau
Tavaputs Plateau
Book Cliffs
Roan or Brown Cliffs
Henry Mts.
La Sal Mts.
Abajo Mts.
Navajo Mt.
Colorado River
Green River
Grand River
San Juan River
Provo City
Springville
Payson
Nephi
Fillmore
Richfield
Beaver
Cedar City
Parowan
Panguitch
Escalante
Kanab
Rockville
St. George
Washington
Virgin
Hurricane
Logan
Brigham
Ogden
Evanston
Kemmerer
Rock Springs
Green River
Price
Castle Gate
Huntington
Orangeville
Castledale
Moab
Monticello
Bluff
Holyoke
Cortez
Dolores
Rico
Telluride
Ouray
Vernal
Roosevelt
Duchesne
Heber
Park City
Salt Lake City
Ogden
Tooele
Grantsville
Lake Pt.
Saltair
Garrison
Deep Creek Mts.
Fish Springs
Trout Creek
Smithville
Oasis
Deseret
Scipio
Holden
Redmond
Burbank
Kanosh
Black Rock
Smiths Ranch
Milford
Frisco
Upton
Thermo
Greenville
Marysvale
Junction
Sulphur Spring
Nada
Minersville
Coyote
Paragonah
Parowan
Cedar City
Hebron
Pinto
Kanarra
New Harmony
Pine Valley
Washington
Leeds
Silver Reef
Toquerville
Virgin
Glendale
Ranch
Rockville
Kanab
Johnson
Kimball
Navajo Cr.
Chaffy
Paria
Malad City
Preston
Lewiston
Richmond
Smithfield
Logan
Providence
Wellsville
Paradise
Woodruff
Randolph
Laketown
Garden City
Brigham
Willard
Plain City
N. Ogden
Huntsville
Ogden
Uintah
Farmington
Centerville
Bountiful
Layton
Kaysville
Clearfield
Syracuse
Hooper
Roy
Ogden
Morgan
Croydon
Coalville
Upton
Wanship
Kamas
Park City
Midway
Heber
Charleston
Provo
Orem
American Fork
Lehi
Alpine
Draper
Sandy
Bingham Canyon
Stockton
St. John
Ophir
Mercur
Fairfield
Vernon
Dutch Mt.
Granite Mts.
Deep Creek
Rush Lake
Cedar Mts.
Shell Valley
Spanish Fork
Thistle Jc.
Spanish Fork Peak
Clear Creek
Colton
Scofield
Castle Gate
Price
Wellington
Mt. Pleasant
Spring City
Ephraim
Manti
Gunnison
Sterling
Mayfield
Willow Creek
Ferron
Emery
Castle Valley
Farnham
Cedar
Lower Cross Sta.
Sphinx
Green River
Cottonwood
Cisco
Solitude
Cliff
Orangeville
Castledale
Huntington
Patmos Head
Roan or Brown Cliffs
Book Cliffs
Mt. Nebo
Mona
Indianola
Fountain Green
Levan
Juab
Mills
Rivers de
Leamington
Oasis
Deseret
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Holden
Redmond
Burbank
Kanosh
Black Rock
Smiths Ranch
Milford
Frisco
Upton
Thermo
Greenville
Marysvale
Junction
Sulphur Spring
Nada
Minersville
Coyote
Paragonah
Parowan
Cedar City
Hebron
Pinto
Kanarra
New Harmony
Pine Valley
Washington
Leeds
Silver Reef
Toquerville
Virgin
Glendale
Ranch
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Kimball
Navajo Cr.
Chaffy
Paria
Malad City
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Lewiston
Richmond
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Providence
Wellsville
Paradise
Woodruff
Randolph
Laketown
Garden City
Brigham
Willard
Plain City
N. Ogden
Huntsville
Ogden
Uintah
Farmington
Centerville
Bountiful
Layton
Kaysville
Clearfield
Syracuse
Hooper
Roy
Ogden
Morgan
Croydon
Coalville
Upton
Wanship
Kamas
Park City
Midway
Heber
Charleston
Provo
Orem
American Fork
Lehi
Alpine
Draper
Sandy
Bingham Canyon
Stockton
St. John
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Marysvale
Junction
Sulphur Spring
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Minersville
Coyote
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Kaysville
Clearfield
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Hooper
Roy
Ogden
Morgan
Croydon
Coalville
Upton
Wanship
Kamas
Park City
Midway
Heber
Charleston
Provo
Orem
American Fork
Lehi
Alpine
Draper
Sandy
Bingham Canyon
Stockton
St. John
Ophir
Mercur
Fairfield
Vernon
Dutch Mt.
Granite Mts.
Deep Creek
Rush Lake
Cedar Mts.
Shell Valley
Spanish Fork
Thistle Jc.
Spanish Fork Peak
Clear Creek
Colton
Scofield
Castle Gate
Price
Wellington
Mt. Pleasant
Spring City
Ephraim
Manti
Gunnison
Sterling
Mayfield
Willow Creek
Ferron
Emery
Castle Valley
Farnham
Cedar
Lower Cross Sta.
Sphinx
Green River
Cottonwood
Cisco
Solitude
Cliff
Orangeville
Castledale
Huntington
Patmos Head
Roan or Brown Cliffs
Book Cliffs
Mt. Nebo
Mona
Indianola
Scofield
Fountain Green
Levan
Juab
Mills
Rivers de
Leamington
Oasis
Deseret
Oak City
Scipio
Holden
Redmond
Burbank
Kanosh
Black Rock
Smiths Ranch
Milford
Frisco
Upton
Thermo
Greenville
Marysvale
Junction
Sulphur Spring
Nada
Minersville
Coyote
Paragonah
Parowan
Cedar City
Hebron
Pinto
Kanarra
New Harmony
Pine Valley
Washington
Leeds
Silver Reef
Toquerville
Virgin
Glendale
Ranch
Rockville
Kanab
Johnson
Kimball
Navajo Cr.
Chaffy
Paria

COLORADO.

Kol-o-rah'-do.
"Centennial State."

Spanish—"Red or Colored."

Historical.—Territory acquired under Louisiana purchase of 1803 and Mexican cession of 1848. First explorations made by Spaniards under Coronado, 1540. United States Government expedition under Major Pike, 1806; Long's expedition, 1820; Frémont's, 1842-4. First settlement made by trappers on present site of Denver, 1858. Colorado Territory organized, 1861; State admitted into Union, August 1, 1876. Thirty-eighth State admitted.

Area.—Total area, 103,925 square miles; land, 103,645 square miles or 66,332,800 acres; water, 280 square miles; length east and west, 380 miles; breadth, 280; appropriated land, 21,207,912 acres; unsurveyed, 4,515,634 acres; reserved, 5,490,001 acres. Counties, 56.

Physical Features.—Surface comprises three great natural divisions: The great plains of the east, mostly treeless, average elevation, 5,000 feet; the well-watered and timbered foothills west of the plains, 6,500 to 8,000 feet; the Rocky Mountain region covering nearly entire western half of State and including many of highest peaks of system—Pike's, Long's, Harvard, the famous Mount of the Holy Cross, and, highest in altitude, Sierra Blanca, 14,464 feet. State has a number of notable natural "parks," the best known are North Park, area 2,600 square miles; Middle Park, 3,000; South Park, 2,200; San Luis, 9,400. Platte, Arkansas, and Rio Grande are principal rivers. Lowest lake, 7,000 feet above sea level; highest, 9,500 feet.

Forestry.—Timber lands comprise about 13,000,000 acres; some of the largest forests in northern portions of State. Yellow and white pine and spruce predominate; the two former are used largely for lumber; piñon used chiefly for fuel and charcoal; small streams bordered with cottonwood, red oak, black cherry, etc. State abounds in ornamental trees and shrubbery. Timber culture receiving attention; experiments prove that black walnut and other trees of commercial value may be grown on the plains.

Climate varying, chiefly with altitude, but healthful. Pure, dry, and bracing air between the extremes of summer and winter; skies clear. Favorite resort for invalids and pleasure-seekers; heat never oppressive. Rainfall throughout greater part of State averages less than 15 inches; within limited areas and at great elevations exceeds 20 inches. Mean annual rainfall, Denver, 14.5 inches; temperature, 49.7 deg.; highest, 105 deg.; lowest, 29 deg. below.

Agriculture.—Large areas capable of cultivation under irrigation; possibilities of industry limited only by water supply as soil yields generously. Area irrigable farming land, 5,000,000 acres; under cultivation, 2,500,000 acres. Leading crops, wheat, oats, alfalfa, and potatoes; all cereals except rice, garden products, and fruits easily grown. Area under orchards, 100,000 acres; value of fruit products, 1894, $3,000,000. Western slope adapted to peaches and grapes. Culture of sorghum, hops, broom corn, sugar beets, and tobacco receiving attention. Productions and value of leading farm crops, 1900: Hay, 799,611 acres, 1,783,133 tons, value $13,551,811; wheat, 318,899 acres, 7,207,117 bushels, $4,828,768; corn, 167,839 acres, 3,188,941 bushels, $1,530,692; oats, 99,768 acres, 3,272,390 bushels, $1,407,128; potatoes, 33,273 acres, 1,863,288 bushels, $1,527,896.

Live Stock.—Cattle-raising and sheep husbandry extensive pursuits. western slopes, covered with nutritious grasses, afford unexcelled grazing. Area of non-irrigated meadow lands, 1,000,000 acres. Colorado one of great wool-producing States. Poultry and all dairy products promising sources of profit. Number and value of farm animals, June, 1900: Horses, 236,546, $7,308,726; sheep, 2,044,814, $5,584,897; milch cows, 100,116, $3,797,997; other cattle, 1,333,202, $31,734,741; hogs, 101,198, $482,722; mules, 6,784, $325,547. Wool clip, 1901, 8,254,019 pounds.

Fish and Game.—Colorado waters are being rapidly restocked by the three State fish hatcheries—Denver hatchery near Platte River, nine miles from Denver; Gunnison hatchery, Gunnison; La Plata hatchery, twelve miles from Durango. Lakes and streams stocked principally with black spotted mountain, eastern brook, and rainbow trout. Owing to protection, all kinds of game—elk, deer, antelope, mountain sheep, etc.—rapidly increasing; most highly prized, elk and grizzly bear; most numerous, mule deer and antelope. Grizzly, brown, and black bear plentiful in Western Colorado.

Manufactures.—Manufacturing industries steadily increasing in number and importance. Abundance of raw material and great natural advantages afford exceptional facilities. Metal industries lead. Denver and Pueblo chief centers, especially for smelting and iron works, foundries, and rolling mills. Value of all manufactured products, 1900, $102,830,137; 142 per cent increase in decade; total capital, $62,825,472. Foundry and machine shop products, $3,986,915; flouring mills, $4,528,062; meat-packing, $3,562,357. Value of steel rails, $6,108,295. Colorado, the leading Western State in production of coke; establishments, 1900, 12; ovens, including 36 gas retorts, 1,488, product, 618,755 short tons; value at the ovens, $1,746,730. Total value brick and tile, $497,238. Production of pig iron is about 40,000 long tons in all. Fermented liquor, Colorado and Wyoming, 1900-01, 296,929 barrels; distilled spirits, 680 gallons.

Minerals.—One of the richest States in Union in mineral wealth. Mining a leading industry. Gold, silver, lead, and copper most important minerals. In 1900 State ranked first in production of gold and silver. Value of mineral output, 1898, $42,646,344; 1899, $48,320,342, gold, 1900, 1,394,622 ounces, $28,829,400; silver, 20,483,900 ounces, $12,700,018; output of lead, 82,137 short tons; output of copper 7,826,949 pounds. Coal bearing area, 20,000 square miles; number of mines, 1897, 97; output, 1900, 5,244,364 tons, value $5,858,036; manufactured into coke, 1900, 997,861 short tons. Petroleum, 1900, 317,385 barrels, value $323,434; asphaltum, Colorado and Utah, 1896, 3,170 tons, $49,680; natural gas, 1900, $1,800; iron, 407,084 long tons; value at mines, $1,510,831; value of granite quarried, $143,054; limestone, $160,587; sandstone, $119,658.

Population, 1860, 34,277; 1890, 412,198; 1900, 539,700: Male, 295,332; female, 244,368; native, 448,545; foreign, 91,155; white, 529,046; colored, 10,654; African, 8,570; Chinese, 599; Japanese, 48; Indians, 1,437.

Cities.—*Denver*, "Queen City of the Plains," capital and largest city, settled, 1858; important railway and commercial center; large smelting works; population, 1900, 133,859. *Pueblo*, second city, center of fine agricultural and stock-raising region; has manufactures of iron, steel, and lead; population, 28,157. *Colorado Springs*, prominent railway center and notable health resort, near foot of Pike's Peak—Manitou Springs, "Saratoga of the West," five miles distant—population, 21,085. *Leadville*, smelting and refining center for lead and silver ores; population, 12,455. *Cripple Creek*, center of important mining district; population, 10,147. *Boulder*, population, 6,150. *Trinidad*, mining center in vicinity of Raton coal fields; population, 5,345.

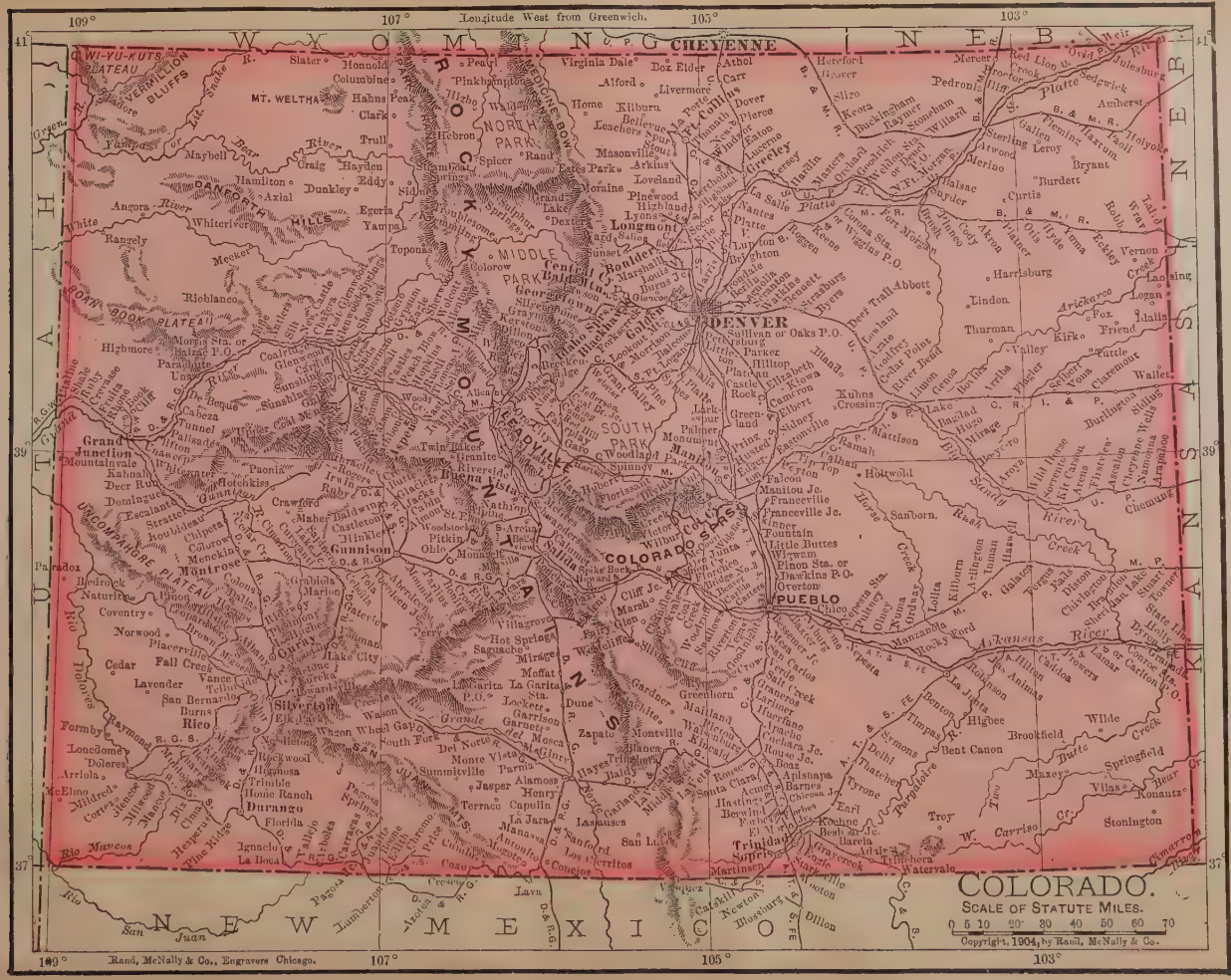
Railways.—Earliest railroad in State—the Denver Pacific—completed from Denver to Cheyenne, Wyo., 1870. Total number of miles in operation in 1870, 157; 1875, 807; 1880, 1,570; 1890, 4,291; July, 1900, 4,587.25.

Education.—Public school enrollment, 1899-00, 118,750; expenditure, 1899-00, $2,793,648. School age, 6-21; compulsory school age, 8-14. Text-books furnished indigent children. Public high schools, 44; private secondary schools, 6. State Industrial School and School of Mines, Golden; Colorado College, Colorado Springs; State University, Boulder; Agricultural College, Fort Collins; Normal School, Greeley.

Political.—State, congressional, and presidential elections, Tuesday after first Monday in November. Number of Senators, 26; Representatives, 49; sessions, biennial, in odd-numbered years, meeting first Wednesday in January; limit of session, 90 days; term of Senators, 4 years; Representatives, 2 years. Number of electoral votes, 4. Voters must be residents of State 6 months, of county and town 90 days, precinct 10 days; registration required; Australian ballot. Convicts, unless restored to citizenship, excluded. Right of suffrage extended to women, 1893.

Legal Holidays.—January 1, February 22, Arbor Day, May 30, July 4, Admission Day, first Monday in September, Thanksgiving, December 25, general election day, and Saturday afternoon.

Legal.—Statutes of limitation: Actions of debt founded upon contract, judgments, sealed instruments, 6 years; redemption of tax sales, 3 years. Legal interest rate, 8 per cent; by contract, no limit.


Longitude West from Greenwich.
109°
107°
105°
103°
41
39
37
WYOMING
NEBRASKA
UTAH
COLORADO
NEW MEXICO
CHEYENNE
DENVER
PUEBLO
COLORADO SPRINGS
Grand Junction
Gunnison
Montrose
Durango
Silverton
Rico
Leadville
Buena Vista
Salida
Canon City
Trinidad
Las Animas
Lamar
Holyoke
Sterling
Julesburg
Wray
Yuma
Burlington
Kit Carson
Eads
Springfield
Stonington
Dillon
Lava
Mt. Weltha
Rangely
Meeker
Craig
Steamboat Springs
Hot Sulphur Springs
Kremmling
Georgetown
Central City
Idaho Springs
Golden
Boulder
Longmont
Fort Collins
Greeley
Loveland
Estes Park
Pinewood Springs
Lyons
Brighton
Platteville
Fort Morgan
Sterling
Julesburg
Akron
Otis
Holyoke
Wiggins
Roggen
Keene
Corona Sta.
Fort Lupton
Hudson
Bijou
Deer Trail
Abbott
Lindon
Harrisburg
Thurman
Valley
Kirko
Friend
Idalia
Wallet
Vernon
Lansing
Logan
Fox
Arickaree
Claremont
Burlington
Stallings
Cheyenne Wells
Arapahoe
Chiesman
Sanborn
Rush
Scranton
Hotwold
Calhan
Falcon
Peyton
Manitou Jc.
Franceville Jc.
Franceville
Fountain
Little Buttes
Wigwam
Pinon Sta. or Dawkins P.O.
Overton
Chico
Colorado Springs
Cliff Jc.
Marsh
Glen
Wilbur
Victor
Cripple Creek
Florence
Penrose
Rockvale
Coal Creek
Canon City
Parkdale
Texas Creek
Howard
Salida
Wellsville
Poncha Springs
Villa Grove
Hot Springs
Saguache
Mirage
Moffat
La Garita
Sta.
Garrison
Garnett
Dune
Zapata
Montville
Blanca
Greenhorn
Maitland
Walsenburg
Gardner
Cuchara Jc.
Rouse Jc.
Boaz
Apishapa
Barnes
Chicosa Jc.
Earl
Kochne
Besh ar Jc.
Barela
Aguilar
Trinidad
Simpson
Gray Creek
Tollbera
Watervale
Martinsen
Starkville
Weston
Boncarbo
Thatcher
Delhi
Timpas
Simons
Bent Canon
Brookfield
Wilde
Higbee
Hilton
Robinson
Model
Olney Springs
Ordway
Rocky Ford
Manzanola
Fowler
Caddoa
Lamar
Prowers
Conco
Carrizo
Wolf Creek
Burlington
Flagler
Seibert
Vona
Claremont
Wallet
Lake
Bacland
Hugo
Limon
Genoa
Bovina
Lorita
Hugo
Mirage
Deer Trail
Lowell
Lancaster
Strasburg
Byers
Bennett
Watkins
Barr
Denver
Sullivan or Oaks P.O.
Parker
Hilltop
Elizabeth
Kiowa
Cameron
Gilbert
Castle Rock
Greenland
Sedalia
Palmer
Monument
Larkspur
Kuhns Crossing
Elbert
Sidney
Eastonville
Falcon
Peyton
Colorado Springs
Manitou
Cascade
Chipita Park
Green Mountain Falls
Divide
Ute Pass
Florissant
Hartsel
Lake George
Antero Jc.
Antero
Garo
Woodland Park
Twin Lakes
Granite
Buena Vista
Nathrop
Salida
Wellsville
Howard
Spike Buck

ARIZONA. Ar-i-zō'-na.

Meaning uncertain—said to be corruption of Pima "Orlison," Little Creeks.

Historical.—Comprises territory acquired from Mexico chiefly at cession of 1848, but partly included in Gadsden purchase 1853. Visited by Spanish explorers 1526; visited by American trappers 1824; by General Frémont 1849. Yuma founded 1854. Territory organized 1863; capital established at Prescott 1864; Tucson 1867; Phœnix 1889.

Area, 113,020 sq. miles; 112,920 land; 100 water; extreme length, 375 miles; breadth, 340. Counties, 13; Indian reservations, 11.

Physical Features.—Surface consists mainly of high plains. Elevation of more than half the area above 5,000 feet. Mogollon and Gila mountains in east; highest altitude, San Francisco Mountain, 12,794 feet. Chief river, Colorado; most noted gorge, Grand Cañon of Colorado, walls of which rise from 3,000 to 6,000 feet sheer from water's edge. Petrified forest in Apache County a notable feature; contains finest and largest known specimens of silicified wood.

Climate tropical in southwestern section, temperate in valley regions, and frigid in elevated mountain districts. Air dry and clear. Mean annual rainfall, Prescott, 16.1 inches; temperature, 53.3 deg.; highest, 100 deg.; lowest, 18 deg. below.

Agriculture, Etc.—Agriculture increases in importance as irrigation extends. Area, 1900, excluding Indian farms, 1,891,935 acres; now under canal irrigation, 185,396 acres. Cereals and potatoes grown in all parts. Sugar-beet, tobacco, ramie, sugar-cane, peanuts, and cotton successfully cultivated. Staple crops: Corn, 1899, 204,748 bushels, value $151,564; potatoes, 33,927 bushels, $33,928; wheat crop, 440,252 bushels, $276,639; hay, 177,831 tons, $1,361,422. Horticulture an important and profitable pursuit. Oranges, lemons, figs, olives, dates, and almonds grown in south. Large quantities of apricots and grapes shipped from Salt River Valley. Strawberries ripen in valley every month in year. Fine apples, peaches, apricots, nectarines, and grapes grown in north in limited quantities.

Live Stock interests extensive and flourishing. Grazing lands afford unsurpassed facilities for industry—estimated area, 35,000,000 acres. Climate and food favorable to development of high-grade stock. Number and value of animals, 1900: Horses, 125,063, $1,701,905; sheep, 861,761, $1,837,794; milch cows, 17,965, $577,693; other cattle, 724,670, $10,789,773; swine, 18,103, $80,587; mules, 8,702, $155,701; wool clip, 1901, 5,013,435 pounds.

Minerals a source of great wealth. Arizona ranks high in production and value of gold and silver, third in production of copper. Gold mined, 1900, 202,856 ounces, value $4,193,400; silver, 2,995,500 ounces; copper, 118,317,764 pounds; value lead output, 1899, 3,377 tons. Aggregate value gold, silver, and copper, 1877-95, $113,739,126. Sandstone quarried, 1900, $64,000; marble, $5,000.

Population, 1870, 9,658, 1890, 59,620; 1900, 122,931: Male, 71,795; female, 51,136; native, 98,698; foreign, 24,233; white, 92,903; colored, 30,028; African, 1,848; Chinese, 1,419; Japanese, 281; Indians, 26,480.

Cities.—*Tucson*, metropolis, founded 1560; population, 1900, 7,531. *Phœnix*, capital, center of important agricultural and mining districts; population, 5,544. *Jerome*, population, 2,861, and *Globe*, 1,495, centers of copper mining districts. *Prescott*, outlet of gold and silver mining district; population, 3,559.

Railroads all constructed since 1877. Miles of road in 1880, 349; 1890, 1,094; 1894, 1,355.46; July, 1900, 1,511.89.

Education.—Expenditure for public schools, 1899-00, $299,730; enrollment, 31,240 pupils; private, 1,212; school age, 6-18. University of Arizona, at Tucson; Normal School, Tempe.

Political.—Territorial elections biennial, Tuesday after first Monday in November. Number of Senators, 12; Representatives, 24; term, 2 years; sessions biennial, meets third Monday in January; term, 60 days. Voters must be actual citizens, residents of Territory 1 year, county and district 10 days; registration required.

Legal Holidays.—January 1, Arbor Day, February 22, May 30, July 4, Thanksgiving, December 25, special election called by Governor.

Legal.—Statutes of limitation: Judgments, written contracts, 5 years; verbal contracts, open accounts, 3; written instruments executed without Territory, personal actions, 1; redemption from tax sale, 1 year. Legal rate of interest, 7 per cent; by contract, any.

NEW MEXICO. Nu Mek'-si-ko.

Originally applied only to City of Mexico. Aztec "Mexitl," Aztec god of war.

Historical.—Eastern two-thirds of territory originally formed part of Texas; western portion acquired by Mexican cession of 1848 and Gadsden purchase 1853. Visited by Nunez 1537; by Coronado 1541. Territory explored and named New Mexico by Bonillo 1581. Santa Fe first visited by Europeans about 1542; capital of State since 1640. Territory organized September 1850; reduced to present limits 1866.

Area, 122,580 square miles; land, 122,460; water, 120; average breadth, 335 miles; eastern boundary, 345; western boundary, 390. Counties, 19.

Physical Features.—Surface a plateau ranging from 3,000 to 6,000 feet in elevation, bearing many isolated peaks which tower above snow line. Eastern New Mexico, a continuation of Texan plain, drained by Rio Grande, Pecos, and Canadian rivers, rising gradually to Rocky Mountains. Highest altitude, Cerro Blanco, 14,269 feet.

Climate healthful; air dry and clear with bright skies; winters severe in elevated portions; rainfall, limited to summer, scanty. Mean annual rainfall Santa Fe, 14.2 inches; temperature, 49.3 deg.; highest, 97 deg.; lowest, 13 deg. below.

Agriculture chiefly confined to irrigated areas, which yield abundantly. Wheat and corn the principal cereals. Farm products, 1900: Hay, 77,341 tons, value $765,676; potatoes, 18,544 bushels, $21,140; corn, 554,752 bushels, $355,041; wheat, 3,847,347 bushels, $2,616,196; oats, 229,994 bushels, $110,397. Culture of sugar-beets a prominent industry in Pecos Valley; area devoted to culture, 1899, 2,000 acres. Horticulture greatly advanced in Pecos and other irrigated valleys. Apples, peaches, apricots, grapes, figs, pomegranates, and melons are grown.

Live Stock.—Cattle and sheep comprise chief live-stock interests. Number and value of farm animals, June, 1900: Horses, 131,153, $2,220,469; mules, 5,311, $183,132; sheep, 924,761, $1,901,764; swine, 20,426, $81,644; milch cows, 16,775, $510,048; other cattle, 975,084, $17,467,883; total value, $31,644,179. Wool clip, 1901, 15,725,000 pounds.

Manufactures include flouring, quartz and lumber mills, and the manufacture of coke. Output of coke ovens, 1900, 44,774 tons, value $130,251. Fermented liquor, New Mexico and Arizona, 1900-01, 4,418 barrels; distilled spirits, 2,200 gallons. Beet-sugar factory at Eddy has a daily capacity of 200 tons; sugar produced, 1898, 900 tons, value $100,800.

Minerals abundant. Large deposits of iron ore in Grant County. Precious stones, especially turquoise, are found; production increasing. Sandstone and limestone quarried. Copper, 1900, 4,169,400 pounds; lead, 1899, 4,850 tons; gold, 1900, 40,292 ounces, value $832,900; silver, 434,300 ounces. Coal output 1900, 1,299,299 tons, value $1,776,170.

Population, 1850, 61,547; 1890, 153,593; 1900, 195,310: Male, 104,228: female, 91,082, native, 181,685; foreign, 13,625; white, 180,207; colored, 15,103; Africans, 1,610; Chinese, 341; Japanese 8; Indians, 13,144.

Cities.—*Santa Fe*, capital, one of the oldest cities in United States; important railroad center; population, 1900, 5,603. *Albuquerque*, metropolis; population, 6,238. *Las Vegas*, railroad and manufacturing center; good export trade in wool; population, 3,552. *Raton*, population 3,540, and *Silver City*, 2,735, flourishing towns in important mining districts.

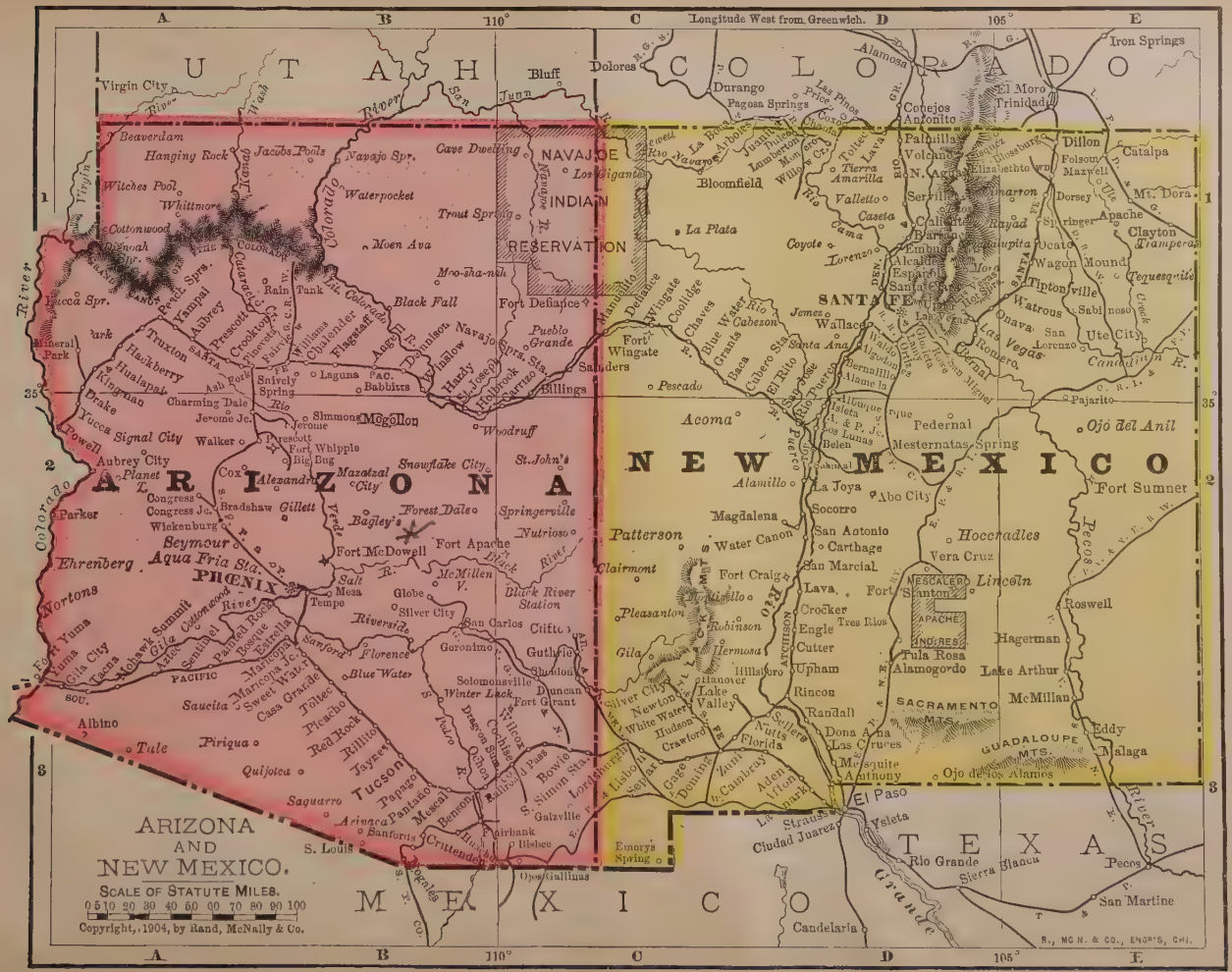
Railways.—First railroad constructed—Atchison, Topeka & Santa Fe—1879. Number of miles in operation, 1880, 643; 1890, 1,338; January, 1898, 1,502.07; July, 1900, 1,752.52.

Education.—Public school system established 1884. Expenditure, 1899-00, $343,429; enrollment, 54,820; private, 3,671 pupils; school age, 6-21; compulsory, 8-16. State University, Albuquerque; Agricultural College, Las Cruces; School of Mines, Socorro.

Political.—Territorial elections biennial, Tuesday after first Monday in November. Number of Senators, 12; Representatives, 24; term, 2 years; sessions biennial, meets last Tuesday in December; limit, 60 days. Voters must be actual citizens, residents of Territory 6 months, county 3; registration required.

Legal Holidays.—January 1, February 22, Arbor Day, July 4, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, 7 years; promissory notes, written contracts, 6; open accounts, unwritten contracts, personal actions, 6; redemption of tax sales, 3. Legal interest rate, 6 per cent; by contract, 12.


Longitude West from Greenwich.
110°
105°
U T A H
C O L O R A D O
N E W M E X I C O
A R I Z O N A
T E X A S
M E X I C O
NAVAJO INDIAN RESERVATION
SANTA FE
PHOENIX
Virgin City
Bluff
Dolores
Durango
Iron Springs
Alamosa
El Moro
Trinidad
Bloomfield
Fort Defiance
Fort Wingate
Gallup
Laguna
Albuquerque
Pedernal
Mesternatas
Ojo del Anil
Fort Sumner
Acoma
Socorro
Magdalena
Patterson
Water Canon
San Antonio
Carthage
Hoccradles
Vera Cruz
Lincoln
Roswell
Hagerman
Lake Arthur
McMillan
Eddy
Malaga
Ojo de los Alamos
Fort Craig
Lava
Fort Stanton
Tres Rios
Engle
Cutter
Upham
Rincon
Randall
Dona Ana
Las Cruces
Mesquite
Anthony
El Paso
Veleta
Ciudad Juarez
Rio Grande
Pecos
San Martine
Candelaria
Grande
Sierra Blanca
Clairmont
Pleasanton
Gila
Hermosa
Silver City
Newton
White Water
Hudson
Crawford
Florida
Nutt's
Zuñi
Cambray
Aden
Hondo
Prairie
Lordsburg
Separ
Deming
Columbus
Las Cruces
Mesquite
Anthony
Ojo de los Alamos
Tula Rosa
Alamogordo
Lake Arthur
McMillan
Eddy
Malaga
Hagerman
Roswell
Lincoln
Fort Stanton
Vera Cruz
Hoccradles
Peco's
Pajarito
Ojo del Anil
Fort Sumner
Abo City
La Joya
Alamillo
Belen
Los Lunas
Isleta
Albuquerque
Las Vegas
Romero
Onava
San Lorenzo
Ute City
Watrous
Wagon Mound
Tipton
Sabinoso
Tequesquite
Springer
Rayad
Cimarron
Dorsey
Dillon
Folsom
Maxwell
Catalpa
Clayton
Trampero
Mt. Dora
Apache
Elizabethtown
Palmilla
Volcano
Cotejos
Antonito
Tierra Amarilla
Valleto
Caseta
Coyote
La Plata
Lorenzo
Embudo
Alcalde
Espanola
Santa Cruz
Barranco
Cebolla
Jemez
Wallace
Santa Ana
Cuba
Cabezon
Rio Puerco
Rio Chaves
Blue Water
Grants
Coolidge
Wingate
Manuelito
Defiance
Navajo Spr.
Cave Dwelling
Los Gigantes
Moen Ava
Moo-sha-nuh
Trout Spr.
Waterpocket
Black Fall
Pueblo Grande
Navajo Spr.
Dennison
Winslow
Hardy
Holbrook
Carrizo
Sta. Fe
Salt R.
Verde R.
Colorado R.
Little Colorado R.
Grand Canon
Canon de Chelly
Chinle
Ganado
Keam's Canon
Moqui Villages
Oraibi
Moenkopi
Tuba
Navajo Mts.
Kaibito
Marsh Pass
Kayenta
Tsegi
Monument Valley
Mexican Hat
Bluff
San Juan R.
Montezuma Cr.
Aneth
Hatch
Gothic
Paradox Valley
Dolores R.
Rico
Telluride
Ophir
Silverton
Animas R.
Animas Forks
Howardsville
Lake City
Gunnison R.
Gunnison
Crested Butte
Pitkin
Tomichi
Sargents
Marshall Pass
Poncha Springs
Salida
Arkansas R.
Buena Vista
Leadville
Granite
Twin Lakes
Independence
Aspen
Glenwood Springs
Grand R.
Grand Junction
Fruita
Loma
Mack
Dominguez
Escalante
Uncompahgre
Ouray
Ridgway
Placerville
Telluride
Ophir
Silverton
Animas R.
Animas Forks
Howardsville
Lake City
Gunnison R.
Gunnison
Crested Butte
Pitkin
Tomichi
Sargents
Marshall Pass
Poncha Springs
Salida
Arkansas R.
Buena Vista
Leadville
Granite
Twin Lakes
Independence
Aspen
Glenwood Springs
Grand R.
Grand Junction
Fruita
Loma
Mack
Dominguez
Escalante
Uncompahgre
Ouray
Ridgway
Placerville
Beaverdam
Hanging Rock
Jacobs Pools
Witches Pool
Whittmore
Cottonwood
Zion Park
Kanab
Pipe Spr.
Kanab Cr.
Virgin R.
Virgin Creek
Toquerville
Rockville
Springdale
Grafton
Orderville
Mt. Carmel
Glendale
Alton
Kanab
Fredonia
Pipe Spr.
Kanab Cr.
Johnson
Pahreah
Lee's Ferry
Marble Canon
Navajo Bridge
Cameron
Moenkopi
Tuba
Navajo Mts.
Kaibito
Marsh Pass
Kayenta
Tsegi
Monument Valley
Mexican Hat
Bluff
San Juan R.
Montezuma Cr.
Aneth
Hatch
Gothic
Paradox Valley
Dolores R.
Rico
Telluride
Ophir
Silverton
Animas R.
Animas Forks
Howardsville
Lake City
Gunnison R.
Gunnison
Crested Butte
Pitkin
Tomichi
Sargents
Marshall Pass
Poncha Springs
Salida
Arkansas R.
Buena Vista
Leadville
Granite
Twin Lakes
Independence
Aspen
Glenwood Springs
Grand R.
Grand Junction
Fruita
Loma
Mack
Dominguez
Escalante
Uncompahgre
Ouray
Ridgway
Placerville
Mineral Park
Hualapai
Hackberry
Truxton
Kingman
Drake
Yucca Spr.
Charming Dale
Jerome Jc.
Jerome
Simmons
McGollon
Woodruff
Walker
Prescott
Fort Whipple
Big Dug
Cox
Mazatzal
Snowflake City
St. John's
Aubrey City
Planet
Signal City
Alexandria
Congress
Congress Jc.
Bradshaw
Gillett
Parker
Wickenburg
Bagley's
Forest Dale
Springerville
Nutrioso
Seymour
Aqua Fria Sta.
Ehrenberg
Fort McDowell
Fort Apache
Black R.
Black River Station
Nortons
Salt R.
Mesa
Tempe
Globe
Silver City
McMillen V.
Clifton
San Carlos
Geronimo
Guthrie
Riverside
Florence
Blue Water
Solomonville
Winter Lick
Duncan
Fort Grant
Shelton
Dragoon Springs
Cochise
Fairbank
Bisbee
Tombstone
Benson
Pantano
Mescal
Arivaca
Sanford
Crittenden
Rillito
Jayuca
Tucson
Papago
Picacho
Red Rock
Tolleo
Casa Grande
Maricopa Jc.
Sweet Water
Saucita
Albino
Tule
Piriqua
Quijotoa
Saguarro
S. Louis
Gila City
Yuma
Fort Yuma
Tacna
Mohawk Summit
Gila
Agua Fria
Cottonwood
Sentinel
Palmed Rock
Bonque
Estrella
Maricopa
Sanford

CALIFORNIA. Kal-e-for'-ne-ah. "Golden State."

Name derived from imaginary island in old Spanish romance.

Historical.—Originally formed part of Mexican cession. Explored by Spanish, 1542; English, 1579. San Diego founded by Spanish missionaries, 1769. Territory became part of Mexico, 1822. Pioneers from United States entered, 1826. Frémont's expedition, 1844-5. Ceded to United States 1848. State Constitution prohibiting slavery ratified November, 1849. Admitted to Union September 9, 1850, thirty-first State.

Area, 158,360 square miles; land, 155,980; water, 2,380; length, 770 miles; breadth, 330. Counties, 57.

Physical Features.—Coast line on Pacific about 1,000 miles. State traversed by Sierra Nevada and Coast ranges; highest altitude Mount Whitney, 14,898 feet. Northern section drained by Sacramento River, southern by San Joaquin. Principal lakes Tulare, Tahoe, Mona, and Clear. Extensive forests of redwood, pine, oak, and fir, chiefly in Northern California; redwood belt of Coast Range most valuable. State noted for its picturesque scenery.

Climate mild and equable; atmosphere dry and clear; rainy season, November to April. Rainfall ranges from 40 inches in northern to 16 in central and 10 in extreme southern section. Mean annual rainfall, San Francisco, 23.7 inches; temperature, 56.6 deg.; highest, 100 deg.; lowest, 29 deg. above.

Agriculture, Etc.—All products of temperate and semi-tropical climates flourish. Cereals lead in importance. Leading State in sugar beets. First in barley, second in hops, third in wheat, and fifth in hay raised. Crops, 1900: Barley, 14,856,170 bushels, value $6,388,153; wheat, 28,543,628 bushels, $16,555,304; corn, 1,351,975 bushels, $824,705; oats, 1,477,771 bushels, $679,775; rye, 502,580 bushels, $291,496, potatoes, 2,788,032 bushels, $1,477,657; hay, 2,708,171 tons, $22,071,594; sugar beets, 63,878 acres, 354,942 tons, $1,585,953, hops, 1899, 59,000 bales. Sheep are noted. Value of farm animals, 1900, $65,000,000; wool clip, 1901, 12,318,950 pounds

Horticulture with viticulture very important. In 1899, assessor's report, there were 29,402,287 fruit and nut trees, 452,252 acres, including 16,192,876 bearing trees: Prune trees, 7,872,843; peach, 5,521,967; orange, 3,652,454; apricot, 2,744,910; olive, 2,162,740; almond, 1,603,485; apple, 1,576,796; pear, 1,519,956; lemon, 905,742; besides large numbers of cherry, fig, lime, walnut, plum, nectarine, quince, and grape-fruit. Total shipments in 1899, of fruits, wine, brandy, and vegetables were 55,483 10 ton carloads—green deciduous fruit, 9,694 carloads; citrus fruits (oranges and lemons), 13,192; dried fruits, 8,693 raisins, 3,601; nuts, 661; canned fruits, 7,524; vegetables, 3,404; wines and brandy, 8,714.

Fisheries.—California ranks sixth as a fishing State. Industry constantly developing; quantity and variety of food and game fishes steadily increasing. Capital invested in commercial fisheries, 1899, $2,774,493, catch, 74,559,019 pounds, value $2,551,451. Salmon fishery most important branch of industry, increasing yearly; chinook salmon most valuable variety; catch, 7,084,885 pounds, value $255,249, value of same fish when canned, $1,212,566. Others: Shrimp, cod, flounders, crabs, smelt, rockfish, herring. Whale fishery, $456,463, oysters, $867,000.

Manufactures include textiles, iron and wooden articles, lumber, flour, canned goods, etc. Industries centered chiefly at San Francisco. Value of all products, 1900, $302,874,761; of San Francisco products, 1900, $133,069,416. Silk factories, 5. Had 20 ice factories in 1900, output, 90,679 tons, $115,388. In 1900 beet-sugar factories produced 43,839,911 pounds of refined and 42,091,802 pounds of raw sugar Output of salmon canneries, 1899, 34,180 cases, value $159,468, cheese, about 9,000,000 pounds; wine, 16,000,000 gallons; powder, 13,000,000 pounds. Salt output, 1900, 621,857 barrels, value $216,291. Brick and tile, $1,351,611; lime, $267,800. Refined petroleum, 1899, $697,877 Distilled spirits, 1900-01, 3,387,979 gals.; fermented liquor, 781,845 barrels.

Minerals.—One of the richest mineral regions in the world. Gold leads in importance; first discovered, 1848. Value of production, 1848 to 1899, $756,342,126; in 1900 State ranked second; output, 765,109 ounces, value $15,816,200; silver, 941,400 ounces; copper output, 28,511,255 pounds, over $7,000,000; petroleum, 4,099,485 barrels, $3,863,225. Quicksilver, $1,209,756; borax, 1897, $1,080,000; natural gas, 1900, $79,063; coal, $523,231; granite, $738,933; limestone, $407,489, slate, sandstone, and marble quarried. Ranks first in asphaltum; crude output, 1900, 9,175 tons, $176,473. Clay beds developed in 18 counties.

Population. 1850, 92,597; 1890, 1,208,130; 1900, 1,485,053: Male, 820,531; female, 664,552; white, 1,402,727; colored, 82,326: Africans, 11,045; Chinese, 45,753, Japanese, 10,151; Indians, 15,377.

Cities.—*San Francisco*, metropolis of Pacific Coast, a leading port in United States; seat of a United States mint; population, census of 1900, 342,782. *Los Angeles*, second city, center of fruit and wine district of Southern California; notable winter health resort; population, census of 1900, 102,479. *Oakland*, opposite San Francisco, important manufacturing and trading center; population, 1900, 66,960. *San Jose*, center of important agricultural and horticultural district; population, census of 1900, 21,500. *Sacramento*, capital, prominent railway center, with manufactures and extensive export trade in fruit; population, 1900, 29,282. *Pasadena*, a well-known winter health resort near Los Angeles; population, 9,117.

Railways.—First railway in State, Sacramento Valley, incorporated 1852; 9 miles completed 1855. Railway mileage, 1865, 214; 1875, 1,503; 1885, 3,045; July, 1900, 5,744.04 miles.

Education.—Public school enrollment, 1899-00, 352,270; private, 23,304. Expenditure, $6,909,351. School age, 6-21; compulsory, 8-14. Indigent children furnished text-books. Public and private educational and charitable institutions numerous, including University of California (State), Leland Stanford, Jr., University, and Mills College (women).

Political.—State and federal elections, Tuesday after first Monday in November. Number of Senators, 40; Representatives, 80; sessions biennial, in odd-numbered years; meets in January, limit of session, 90 days; term of Senators, 4 years; Representatives, 2. Number of electoral votes, 9. Voters must be actual citizens, residents of State 1 year, county 90 days, precinct 30; registration required; ballot reform. Idiots, Chinese, and convicts excluded.

Legal Holidays.—January 1 and 24, February 22, May 10 and 30, July 4, Arbor Day and Admission Day, first Monday in October, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, 5 years; written instruments, 4; action or contract not in writing, or executed out of State, 2; personal action, 1. Redemption of tax sale, 1. Legal interest rate, 7; by contract, any.

NEVADA. Ne-vah'-dah. "Silver State."

Spanish—Snowy.

Historical.—Part of Mexican cession of 1848. Explored 1833. First permanent settlement in Carson Valley, 1850. Nevada Territory organized March, 1861. State admitted Oct. 31, 1864.

Area, Etc.—Total, 110,700 square miles; land, 109,740; water, 960; extreme length, 485 miles; breadth, 310. Counties, 14. An elevated plateau traversed by mountain ranges; consists in great part of interior basin with no outlet to the sea. Highest altitude Wheeler Peak, 13,036 feet; general elevation, 5,000 feet. Principal river, Humboldt. Population, 1900, 42,335.

Climate extremely dry; winters sharp. Mean annual rainfall, Winnemucca, 8.5 inches, temperature, 48.6 deg., highest, 104 deg., lowest, 28 deg. below.

Agriculture.—Under irrigation, valleys and natural meadows highly productive, wheat, hay, and vegetables grown. Value of principal crops, 1900, $3,734,648. Stock-raising next to mining the leading industry. Farm animals, 1900, $12,093,608; wool clip, 1901, 4,437,000 pounds.

Minerals.—From 1871 to 1879 Nevada outranked all other States and Territories in production of precious metals. Coining value of gold mined, 1900, $2,006,200; silver mined, 1,358,700 ounces. Lead, copper, and manganese mined, inexhaustible quantities of salt, soda, and borax exist.

Cities, Etc.—*Reno*, seat of State University and Agricultural College, population, 4,500. *Virginia City*, pop., 2,695. *Carson City*, capital, pop., 2,100. Miles railroad, 1900, 920. Public school enrollment, 1899-00, 6,676; expenditure, $224,622.

Political.—State elections biennial. Senators, 15; Representatives, 30; term of Senators, 4 years; Representatives, 2. Electoral votes, 3. Voters must be citizens or declared intention, residents of State 6 months, of county, town, and precinct, 30 days; registration required.

Legal Holidays.—January 1, February 22, May 30, July 4, October 31, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Written contracts, judgments, 6 years; open accounts, unwritten contracts, 4. Redemption from tax sale, 1 year. Legal rate of interest, 7; by contract, any.

CALIFORNIA
AND NEVADA.
SCALE OF STATUTE MILES.
0 5 10 20 40 60 80 100 120 140 160
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Longitude West from Greenwich.
OREGON
NEVADA
SACRAMENTO
SAN FRANCISCO
Oakland
Alameda
San Jose
Stockton
Modesto
Fresno
Bakersfield
Los Angeles
Santa Monica
Pasadena
San Diego
Coronado Beach
National City
La Jolla
Escondido
Oceanside
San Juan
Santa Ana
Redondo
San Pedro
Pacific Beach
Encinitas
Foster
Ramona
Ruthven
Volcano Springs
Palm Springs
Riverside
Redlands
San Bernardino
Ontario
Pomona
Whittier
Downey
Long Beach
Orange
Tustin
Alhambra
Pasadena
Monterey
Santa Cruz
Watsonville
Castroville
Salinas
Gonzales
King City
San Luis Obispo
Santa Maria
Guadalupe
Lompoc
Surf
Rocky Pt
Pt. Concepcion
Port Harford
Cayucos
Cambria
Templeton
Paso Robles
Atascadero
Santa Barbara
Ventura
Hueneme
Oxnard
Santa Barbara I.
San Nicholas I.
Santa Catalina I.
San Clemente I.
Santa Rosa I.
San Miguel I.
Santa Cruz I.
Point Sur
Pt. Arena
Mendocino
Cleone
Fort Bragg
Willits
Ukiah
Lakeport
Clearlake
Cloverdale
Healdsburg
Santa Rosa
Petaluma
Napa
Vallejo
Benicia
Martinez
Richmond
Berkeley
Alameda
San Leandro
Hayward
Niles
Mayfield
Palo Alto
Redwood City
San Mateo
Burlingame
Millbrae
San Bruno
Daly City
Colma
Half Moon Bay
Pescadero
Santa Cruz
Capitola
Aptos
Soquel
Felton
Los Gatos
Saratoga
Campbell
Santa Clara
Milpitas
Alviso
Mountain View
Sunnyvale
Cupertino
Los Altos
Menlo Park
Woodside
Portola Valley
Belmont
San Carlos
Redwood City
Mt. Shasta
Weed
Dunsmuir
Sisson
Yreka
Montague
Hornbrook
Tulelake
Alturas
Cedarville
Eagleville
Fort Bidwell
Goose Lake
Lakeview
Klamath Falls
Klamath Lake
Crescent City
Happy Camp
Orick
Arcata
Eureka
Fortuna
Ferndale
Rio Dell
Scotia
Garberville
Redway
Piercy
Leggett
Laytonville
Covelo
Round Valley
Hopland
Ukiah
Potter Valley
Calpella
Willits
Longvale
Fort Seward
Cahto
Branscomb
Westport
Usal
Shelter Cove
Whitethorn
Honeydew
Petrolia
Capetown
Cape Mendocino
Ferndale
Loleta
Fortuna
Rohnerville
Alton
Blue Lake
Arcata
Eureka
Samoa
Manila
Trinidad
Orick
Requa
Klamath River
Hoopa
Willow Creek
Weitchpec
Somes Bar
Orleans
Happy Camp
Seiad Valley
Hilt
Callahan
Fort Jones
Etna
Scott River
Yreka
Montague
Grenada
Macdoel
Dorris
Tulelake
Lower Klamath Lake
Clear Lake
Fort Bidwell
Adin
Surprise Valley
Cedarville
Alturas
Likely
Eagleville
Bieber
Fall River Mills
Burney
Hat Creek
Old Station
Lassen Peak
Mineral
Manzanita Lake
Chester
Lake Almanor
Westwood
Susanville
Janesville
Milford
Wendel
Amedee
Herlong
Doyle
Portola
Beckwourth
Quincy
Taylorsville
Greenville
Indian Valley
Crescent Mills
Taylorsville
Meadow Valley
Oroville
Chico
Hamilton City
Orland
Willows
Maxwell
Colusa
Williams
Princeton
Grimes
Arbuckle
Dunnigan
Woodland
Davisville
Vacaville
Fairfield
Suisun
Benicia
Vallejo
Napa
Sonoma
Petaluma
Santa Rosa
Healdsburg
Cloverdale
Geyserville
Windsor
Guerneville
Sebastopol
Forestville
Duncans Mills
Jenner
Bodega
Tomales
Point Reyes
Inverness
Olema
Point Reyes Station
Nicasio
San Rafael
Sausalito
Mill Valley
Corte Madera
Larkspur
Ross
San Anselmo
Fairfax
Kentfield
Greenbrae
San Quentin
Richmond
El Cerrito
Albany
Berkeley
Emeryville
Oakland

OREGON. Or'-e-gon. "Beaver" or "Sunset" State.

Algonquin—wau-re-gan—"Beautiful Water."

Historical.—Originally included in Oregon country, occupied jointly by Great Britain and United States until treaty of 1846. Visited by Drake 1558. Mouth of Columbia River discovered and explored by Captain Gray, 1792; river originally called Oregon, name afterward applied to country through which it flowed. Partly explored by Lewis and Clarke, 1804–5. Trading post founded at Astoria 1811; Willamette Valley settled 1834. Oregon Territory, including present States of Washington and Idaho, organized 1848; constitution forbidding slavery and immigration of negroes adopted, 1857. Admitted to the Union, February 14, 1859, the thirty-third State to adopt the Federal Constitution.

Area, 96,030 square miles; land, 94,560; water, 1,470; average length, 360 miles; breadth, 260. Unappropriated land, 34,377,907 acres; unsurveyed, 10,888,046; reserved, 5,500,821. Oregon has three public forests; aggregate area, 4,653,440 acres. Counties, 33.

Physical Features.—State has 330 miles of seacoast, with many deep harbors. Traversed north and south by Cascade Mountains; highest elevations, Mt. Hood, 11,934 feet, Mt. Jefferson, 10,200 feet. Consists physically of three divisions: Eastern Oregon—comprising all counties east of Cascades—Western, and Southern Oregon. Two-thirds of Eastern Oregon table-land, with an average elevation of 3,000 feet; Blue Mountains in northeast, average height, 7,000 feet. Coast Range traverses Western and Southern Oregon, elevation 1,000 to 4,000 feet. Principal river, Columbia, forms 300 miles of northern boundary.

Forests.—Mountain ranges, coast plateau and valleys, and valleys of Willamette and Umpqua densely covered with timber; pine predominates. Douglas spruce furnishes fine masts and spars. State has large lumber export. Lumber cut, 1898, 549,823,179 feet. Value of lumber, 1897, $1,303,945; lumber cut, 1895, 282,182,318 feet. In 1898 Clatsop, Washington, Columbia, and Tillamook counties, in Northwestern Oregon, contained 56,149,200,000 feet of standing timber. Value as standing timber, $28,074,600; in rough lumber, $393,017,400.

Climate varies with topographical features. Western Oregon mild and equable, with heavy winter rainfall; east of the mountains great extremes of temperature are common. Mean annual rainfall at Portland, 46.8 inches; temperature, 53.1 deg.; highest, 102 deg.; lowest, 2 deg. below. At Umatilla, mean annual precipitation, 9.81 inches; mean temperature, 52.9 deg.; January, 32.3 deg.; July, 74 deg.

Agriculture.—Within the fertile valleys of the Willamette and Umpqua, and those watered by the Columbia and Snake rivers, are vast areas of farming lands. State ranks second on Pacific Coast in agriculture. Wheat, oats, barley, corn, hops, and all kinds of vegetables yield abundantly. Excellent sugar beets are successfully produced; flax fiber of superior quality grown. Farm products, 1900: Wheat, 16,198,012 bushels, value $8,908,907; barley, 905,928 bushels, $380,490; oats, 3,282,770 bushels, $1,345,936; corn, 317,147 bushels, $180,774; potatoes, 1,692,020 bushels, $761,409; hay, 1,677,085 tons, $11,404,178; rye, 94,040 bushels, $57,364; hops, 1899, 82,300 bales, $1,999,890; sugar beets, 1898, 826 tons, $92,512. Leads in amount of hops.

Horticulture one of the foremost industries of the State. Throughout Willamette and numerous smaller valleys, and also the irrigated lands east of Cascades, apples, peaches, pears, prunes, grapes, and other fruits flourish; figs grow in southwest. Acreage, 1900: Prunes, 27,000, apples, 16,500; pears, 2,100; peaches, 1,800; cherries, 1,200; mixed, 4,700; total, 53,300. Number orchards, 27,000. Marketable fruit crop, 1895, 35,000,000 pounds. Number of carloads green and dried fruits, 1898, 1,606. Estimated yield of apples, 500 carloads; fresh prunes, 150; pears, 100; plums, 75; strawberries, 75. Cured prunes, 700 carloads, value $525,000; evaporated apples, 6 carloads, value $8,250

Live Stock.—Climate and natural grasses adapted to stock raising, particularly horses, cattle, and sheep. Interior counties of Eastern Oregon devoted almost exclusively to live-stock industry. Dairying carried on extensively. Number and value of farm animals, June, 1900: Horses, 287,932, value $8,651,060; mules, 7,446, $318,249; sheep, 3,040,291, $7,563,447; cattle, 700,303, $15,164,897; swine, 281,406, $1,057,087. Amount of butter and cheese made, 1897, 8,887,445 pounds, value, including eggs, $1,056,128. Wool clip, 1901, 16,169,320 pounds.

Fisheries.—Fish abound in the rivers. Aggregate value of fish industry for thirty-five years, 1866–1901, estimated at $75,000,000. Shad and oysters successfully planted in State waters. Salmon season begins in May, ends in August Canning of salmon an important industry; Columbia River factories most important; first cannery erected 1867. Total number of factories in operation, 1900, 24; capital employed, $2,558,642, value of product, $1,788,809. Cases packed 1899, 341,297; value $1,704,235. Yield of the fisheries of Oregon in 1899, exclusive of the value of canned salmon, 22,818,411 pounds; value $855,750. Persons employed, 5,653; boats, 1,830.

Manufactures.—Extensive and valuable water power, with abundance of raw material, affords excellent facilities for manufacturing industries. Chief manufacturing center, Portland. Lumber, woolen goods, and flour principal products. Beef and pork packing and salmon canning prominent industries. Shipbuilding industry important. Wood pulp, straw, and other paper manufactured. Woodenware factories, tanneries, and ore refineries numerous. Pine-needle factory at Grant's Pass converts foliage of pine into soap, extracts, etc. Lumber and timber products, 1900, $10,352,167; flouring mill products, $6,364,023; value of brick and tile manufactured, $227,141; slaughtering and meat-packing, $1,638,480; woolen goods, $937,824, fermented liquor, 1900-01, 391,755 barrels; distilled spirits, Oregon and Washington, 5,056 gallons. Output of beet sugar, 1898, 1,500,000 pounds.

Minerals.—The mineral resources of State important and varied. First settlements in country due to discovery of gold. Principal minerals mined, gold, silver, and coal. Copper, lead, platinum, nickel, iron, quicksilver, antimony, building stone, limestone, and brick and pottery clays also found. Interior counties of Eastern Oregon generally rich in minerals. Total gold and silver mined in State largely from these counties. Gold output, 1890, $1,087,000; 1900, $1,694,700; silver, 1890, $129,199; 1900, 115,400 ounces, coinage value, $149,204. Commercial value, $71,548. Granite, 1900, $5,313. Number of coal mines 1897, 8, output 1900, 58,864 tons, value $220,000.

Population.—Ranked thirty-fourth in 1850; thirty-eighth, 1870 and 1890; thirty-fifth in 1900. Total population, 1850, 13,294; 1870, 90,923; 1890, 313,767, 1900, 413,536: Male, 232,985; female, 180,551; native, 347,778; foreign, 65,748; white, 394,582; colored, 18,954; African, 1,105; Chinese, 10,397; Japanese, 2,501; Indians, 4,951.

Cities.—*Portland*, on Willamette River, at head of ship navigation. Chief city in State and second on Pacific Coast; prominent railway center and terminus of several steamer lines; manufactures and exports extensive; population, 1900, 90,426. *Salem*, capital, on Willamette River; center of important educational interests; has large manufactures of woolens, flour, and tobacco; population, 1900, 4,258. *Astoria*, flourishing town on Columbia River, principal industry salmon canning; population, 1900, 8,381.

Railways.—Number miles, 1870, 159; 1880, 508; 1887, 1,290; 1890, 1,427.95; June, 1897, 1,529 59 miles; July, 1900, 1,723.80 miles, being 1.82 miles of line for each 100 square miles of territory, and 41.69 miles for each 10,000 inhabitants. The Cascade locks and canal enable boats to pass the cascades of the Columbia River.

Education.—Public school enrollment, 1900, 111,490; expenditures, $1,594,420. Pupils in private schools, 10,744. School age, 4–20; compulsory school age, 8–14. Public high schools, 1900, 17; private secondary, 19. Graded schools, 1898, 245. University of Oregon, Eugene; Willamette University, Salem; State Agricultural College, Corvallis; State Normal Schools at Weston, Monmouth, Drain, and Ashland.

Political.—General election, first Monday in June. Governor and State officers elected quadrennially, members of Legislature and Congress biennially. Number Senators, 30; Representatives, 60; sessions biennial, in odd-numbered years; meeting second Monday in January; limit, 40 days; term of Senators, 4 years; Representatives, 2 years. Number electoral votes, 4. Voters must be citizens of the United States, and residents of the State 6 months, county 90 days, district 30 days; registration not required; ballot reform. Women vote on school matters. Soldiers of the United States army, idiots, Chinese, insane, and convicts unless pardoned, excluded.

Legal Holidays.—January 1, February 22, May 30, July 4, first Monday in September, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, sealed instruments, recovery of real property, 10 years; contracts not under seal, 6. Redemption of tax sales, 2 years. Legal interest, 8 per cent; by contract, 10. Usury forfeits principal and interest.

OREGON.
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60 70
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Longitude West from Greenwich.
124°
122°
120°
118°
46°
44°
42°
PACIFIC OCEAN
WASHINGTON
IDAHO
NEVADA
CALIFORNIA
Columbia
Snake R.
Pt. Adams
Ft. Stevens
Warrenton
Astoria
Seaside
Tillamook Head
Cannon Beach
C. Falcon
Nehalem Bay
Tillamook Bay
Cape Lookout
Netarts
Oretown
Siletz Bay
Yaquina
Newport
Alsea Bay
Tidewater
Florence
Gardiner
Coos Bay
Empire
Marshfield
Bandon
Cape Blanco
Port Orford
Rogue River
Gold Beach
Brookings
Crescent City
Smith R.
Klamath R.
Lost R.
Goose L.
Pyramid L.
Honey L.
Eagle L.
Upper Klamath L.
Lower Klamath L.
Tule L.
Clear L.
Gerber Res.
Malheur L.
Harney Lake
Alkali Lake
Silver Lake
Summer Lake
Paisley
Christmas Lake
Paulina Lake
East Lake
Crane
Burns
Harney
Lawen
Riley
Venator
Juntura
Vale
Ontario
Nyssa
Weiser
Payette
Boise
Nampa
Caldwell
Parma
Huntington
Baker City
La Grande
Pendleton
Walla Walla
Dayton
Waitsburg
Dodge
Spokane
Colfax
Pullman
Moscow
Lewiston
Asotin
Clarkston
Wallowa
Joseph
Enterprise
Elgin
Union
Cove
Island City
Summerville
Hot Lake
Pilot Rock
Heppner
Ione
Lexington
Gooseberry
Condon
Fossil
Mayville
Dayville
Prairie City
John Day
Canyon City
Mitchell
Antelope
Grass Valley
Madras
Metolius
Culver
Opal Springs
Agency
Warm Springs
Simnasho
Shaniko
Wasco
Moro
Grass Valley
Kingsley
Mt. Hood
Parkdale
Hood River
The Dalles
Dufur
Tygh Valley
Maupin
Bend
Redmond
Sisters
Prineville
Paulina
Post
Crook
Ochoco
Haystack Res.
Prineville Res.
Crooked R.
Deschutes R.
Metolius R.
Willow Cr.
Rattlesnake Cr.
Barren Sage Plains
Sage Plains
Juniper L.
Diamond
Narrows
Lake Malheur
Silver Lake
Five
Silvies R.
Silvies Valley
Drewsey
Grove City
Cedar Mts.
Juntura
Owyhee R.
Owyhee Res.
Sheaville
Cow Creek Lake
Jordan Cr.
Jordan Valley
Crooked Cr.
Rattlesnake Cr.
Middle Fork
Owyhee R.
Alvord Valley
Alvord Desert
Steens Mts.
L. Alvord
Andrews
Lisas Lake
Bowdens
Santa Rosa Mts.
Pueblo Mts.
Denio
Alkali Lake
Warner Lake
Lake Lake
Warners Pk.
Chewaucan Marsh
Chewaucan R.
Summer Lake
Paisley
Abert L.
Christmas Lake
Shirk
Old Camp
Warners
Lakeview
Goose L.
Langell Valley
R. Vistillas
Klamath Falls
Klamath Indian Reservation
Fort Klamath
Mt. Scott
Crater L.
Wizard Island
Phantom Ship
Rogue River Mts.
Siskiyou Mts.
Tunnel
Ashland
Medford
Phoenix
Jacksonville
Grants Pass
Merlin
Leland
Leeds
Klamath
Trail
Lucky Queen
Sams Valley
Eagle Point
Rock Point
Wilderville
Dryden
Applegate
Kerby
Brownsboro
Waldo
Cortez
Illinois R.
Illinois Valley
Josephine
Coquille R.
Coquille
Norway
Bandon
Rogue River
Port Orford
Cape Blanco
Eckley
Langlois
Sixes R.
Floras Lake
Myrtle Cr.
Dillard
Roseburg
Wilbur
Oakland
Isaiah
Drain
Yoncalla
Elkton
Comstock
Sutherlin
Oakland
Reedsport
Scottsburg
Gardiner
Florence
Mapleton
Tidewater
Siuslaw R.
Siuslaw
Mapleton
Long Tom
Crow
Eugene
Springfield
Coburg
Junction City
Harrisburg
Irving
Halsey
Brownsville
Rowland
Peoria
Sodaville
Shedds
Albany
Lebanon
Plainview
Scio
Jefferson
Marion
Aumsville
Turner
Salem
Dallas
Monmouth
Independence
Buena Vista
Grand Ronde
Willamina
Sheridan
Amity
McMinnville
Dayton
Lafayette
Yamhill
Carlton
Newberg
Dundee
Sherwood
Tualatin
Wilsonville
Tualatin R.
Willamette R.
Yamhill R.
Portland
Oswego
Lake Oswego
Milwaukie
Gladstone
Oregon City
West Linn
Canby
Aurora
Hubbard
Woodburn
Silverton
Mt. Angel
Scotts Mills
Stayton
Sublimity
Gates
Detroit
Idanha
Mehama
Lyons
Mill City
Gates
Scio
Lebanon
Albany
Corvallis
Philomath
Monroe
Harrisburg
Junction City
Eugene
Springfield
Cottage Grove
Creswell
Dexter
Lowell
Pleasant Hill
Lorane
Walker
Latham
Hazeldell
Comstock
Drain
Yoncalla
Elkton
Reedsport
Scottsburg
Umpqua R.
South Umpqua R.
North Umpqua R.
Calapooia R.
Willamette R.
Santiam R.
Clackamas R.
Sandy R.
Columbia R.
Willamette Valley
Cascade Mts.
Coast Range Mts.
Blue Mts.
Wallowa Mts.
Elkhorn Mts.
Powder River Mts.
Wallowa L.
Powder R.
Burnt R.
Malheur R.
Malheur Res.
Ind. Res.
Strawberry Butte
Castle Rock
Bear Creek Butte
Snow Butte
Three Sisters
Grizzly Butte
Black Butte
Warm Springs Ind. Res.
Mt. Jefferson
Mt. Washington
Three Fingered Jack
Mt. Hood
Mt. Adams
Mt. St. Helens
Mt. Rainier
Mt. Wilson
Mt. Tanny
Mt. Ruth
Mt. Emily
Mt. Maria
Mt. Fanny
Mt. Harris
Mt. Ireland
Mt. Vernon
Mt. Pisgah
Mt. Ashland
Mt. Shasta
Mt. Lassen
Mt. Pitt
Mt. McLaughlin
Mt. Thielsen
Mt. Scott
Mt. Bailey
Mt. Yoran
Mt. Mazama
Mt. Diller
Mt. Prospect
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Mt. Thielsen
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Mt. Bailey
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Mt. Mazama
Mt. Diller
Mt. Prospect
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Rand, McNally & Co., Engravers, Chicago.

WASHINGTON. Wosh'-ing-ton. "Chinook State."

Named in honor of the First President.

Historical.—Region formed central part of Oregon Country claimed by both Great Britain and the United States; northern boundary line established 1846. Discovered by Juan de Fuca, 1592; visited by Spanish, 1775; by Cook, 1778. Columbia River ascended by Captain Gray, 1792; by Lewis and Clarke, 1804-5. Fur traders settled near mouth of Columbia, 1811. Settled by missionaries, 1836-7; Port Townsend founded, 1850; Territory of Washington organized March, 1853; Seattle platted, 1853. Admitted to the Union November 11, 1889, forty-second State.

Area.—Total area, 69,180 square miles; land, 66,880; water, 2,300; length east to west, 360 miles; breadth, 240. Counties, 35. Unappropriated land, 11,125,883 acres; unsurveyed, 5,888,581.

Physical Features.—Cascade Mountains divide the State in two unequal parts, Eastern and Western Washington; three-fifths of entire area comprised in Eastern Washington. Highest elevations, Mt. Rainier, 14,444 feet; Mt. Baker, 10,827 feet. Coast line 1,860 miles; Pacific, 180; straits, about 80; Puget Sound, including indentations, 1,600. Puget Sound, most characteristic factor of Western Washington, noted for its great depth and many fine harbors; area, 2,000 square miles; length in straight line, 90 miles. Columbia River, principal natural feature of Eastern Washington, with its tributaries—Snake, Spokane, Okanogan, and Yakima—drains almost entire section; forms large part of southern boundary.

Forests.—The vast forests of the State form one of its most valuable resources. Estimated area of timber lands, 23,500,000 acres; standing timber, 410,333,335,000 feet. Most extensive forests in Western Washington. Western slope of Cascades heavily wooded, fir predominates; timber of eastern slope includes blue and yellow pine, tamarack, fir, and white cedar.

Climate generally healthful. Western Washington moist and uniform, with heavy winter rainfall; Eastern Washington, hot, dry summers, with generally short, cold winters. Mean annual rainfall at Olympia, 53 1 inches; temperature, 50.2 deg.; highest, 97 deg.; lowest, 2 deg. below.

Game.—Large game consists of elk, in Olympics; mule deer in mountains of Eastern Washington; Virginia deer in brushy bottom lands; black-tail deer throughout Western Washington; black and brown bear and mountain goats in Cascade Mountains. Mountain sheep seldom found. Fur-bearing animals include otter, beaver, muskrat, martin, mink, fisher, coon, skunk, and wolverine. All kinds of grouse, quail, partridge, water fowl, and marsh birds in great numbers.

Agriculture.—Eastern Washington the great grain district; foothills of Cascades in southern and central sections yield all cereals, fruits, and vegetables of temperate zone; sections farther east when irrigated unsurpassed in productiveness. In Western Washington wheat and hops are important products; oats, barley, and hay, with all hardier fruits except the peach and grape successfully grown. Excellent flax produced in Puget Sound region. Farm products, 1900; Wheat, in which State ranks fourth, 25,096,661 bushels, value $12,799,297; corn, 106,140 bushels, $62,623; oats, 3,016,266 bushels, $1,206,490; barley, 1,386,267 bushels, $540,644; rye, 39,169 bushels, $22,718; potatoes, 1,839,644 bushels, $864,633; hay, 846,491 tons, $8,041,664; hops, 36,000 bales, ranking third. Cultivation of the sugar beet increasing.

Horticulture.—An important and growing industry. Walla Walla, Whitman, Yakima, and Wenatchee chief fruit counties. Extensive prune orchards in Western Washington; large areas in Eastern Washington devoted to peaches. Pear, plum, cherry and apple orchards in various sections. Area of plum orchards, 1894, 12,000 acres. Prune-plum crop, 1895, 16,000,000 pounds; over 3,000,000 pounds were dried. Berries shipped to Idaho, Montana, and other points exceeded 20,000 crates. Annual value of fruit products, $2,000,000. Shipments from Eastern Washington, 1898, 1,000 carloads, value $300,000.

Live Stock.—Two-thirds of Eastern, and a large part of Western Washington adapted to grazing. Cattle, horses, and sheep raised in large numbers. Raising Angora goats promises to become a profitable pursuit. Number and value of farm animals, June, 1900: Horses, 243,985, value $8,550,434; mules, 2,690, $138,185; sheep, 929,873, $2,450,939; milch cows, 107,232, $4,076,189; other cattle, 287,691, $5,363,849; swine, 181,535, $830,704; wool clip, 1901, 4,888,000 pounds. Dairying rapidly growing in importance; Kittitas County leads in number of dairies. Cheese produced, 1897, 709,364 pounds; butter, 2,094,427 pounds; cheese shipped, 112,402 pounds; butter, 174,778 pounds.

Fisheries.—Salmon fishery leading branch of industry; other important catches, cod, halibut, sturgeon, oysters, and fur seals. Amount invested in fishing industry, 1899, $6,601,243. Number of employés, 9,911; vessels, 32; boats, 2,566; amount of catch, 120,587,726 pounds, value $2,871,438. Value of catches were: Chinook salmon, $393,031; blue-back salmon, $1,310,315; silver salmon, $364,917; steel-head salmon, $69,242; dog salmon, $110,386; hump-back salmon, $164,712; oysters, $174,567; sturgeon, $3,907; halibut, $191,220; clams, $23,248; smelts, $9,810; crabs, $11,119. Fur seal, seal-lion, and sea-otter pelts, 1895, 86,291.

Manufactures.—Lumber chief manufacturing industry. Latest reports give number of sawmills as 227; shingle, 300; sash, door, and other wood-working factories, 73. Estimated capital in lumber business, $25,000,000; value of annual product, $15,000,000. Output from mills: Lumber, 1,164,495,880 feet; laths, 436,716,000; shingles, 1,883,868,750. Foreign shipments: Lumber, 88,717,658 feet; shingles, 1,757,000. Domestic shipments to 33 States and Territories: Lumber, 364,316,523 feet; shingles, 913,300,000. Output of Tacoma sawmills, 1895, 115,000,000 feet of lumber; shipments from State, 500,075,833 feet, value $7,054,344. Salmon canning important occupation. Number of canneries, 1900, 36; value investment, $2,222,726; cases packed, 1899, 1,041,883, value $4,275,329; the most valuable packs were blue-back salmon, 503,950 cases, worth $2,388,644; and hump-back salmon, 252,733 cases, worth $734,241. State ranks eleventh in manufacture of coke, producing, 1900, 33,387 tons, value $160,165. Value of brick and tile manufactured, 1900, $426,553. Rectified spirits, 1900, 218,426 gallons. Shipbuilding an important industry.

Minerals.—Coal and valuable mineral deposits equally distributed throughout the State. In 1900 Washington ranked eleventh among gold-producing States; among silver tenth; gold mined, 34,743 ounces, value $718,200; silver, 224,500 ounces, commercial value, $139,190. Principal coal-producing State on Pacific coast; one-third of output sent to California. Number of mines, 1897, 23; output, 1900, 2,474,093 tons, $4,700,068. Value lime, 1900, $239,022; sandstone, $68,133. Aluminum and graphite found.

Population.—Ranked fortieth in 1860, forty-second in 1880, thirty-third in 1900. Total, 1860, 11,594; 1880, 75,116; 1890, 349,390; 1900, 518,103: Male, 304,178; female, 213,925; native, 406,739; foreign, 111,364; white, 496,304; colored, 21,799; African, 2,514; Chinese, 3,629; Japanese, 5,617; Indians, 10,039.

Cities.—*Seattle*, metropolis, on eastern shore of Puget Sound; fine deep-water harbor; has large manufactures of lumber, shingles, and machinery; important trade in lumber, coal, hops, and fish; population, 1900, 80,671. *Tacoma*, second city, at head of Puget Sound; fine harbor; prominent commercial and manufacturing center; fish packing and manufacture of lumber important industries; population, 37,714. *Spokane*, center of a great wheat-producing section and of mineral district of Eastern Washington; population, 36,848. *Walluwalla*, outlet of a flourishing agricultural district; population, 10,049. *Olympia*, capital, situated at head of Puget Sound; population, 4,082.

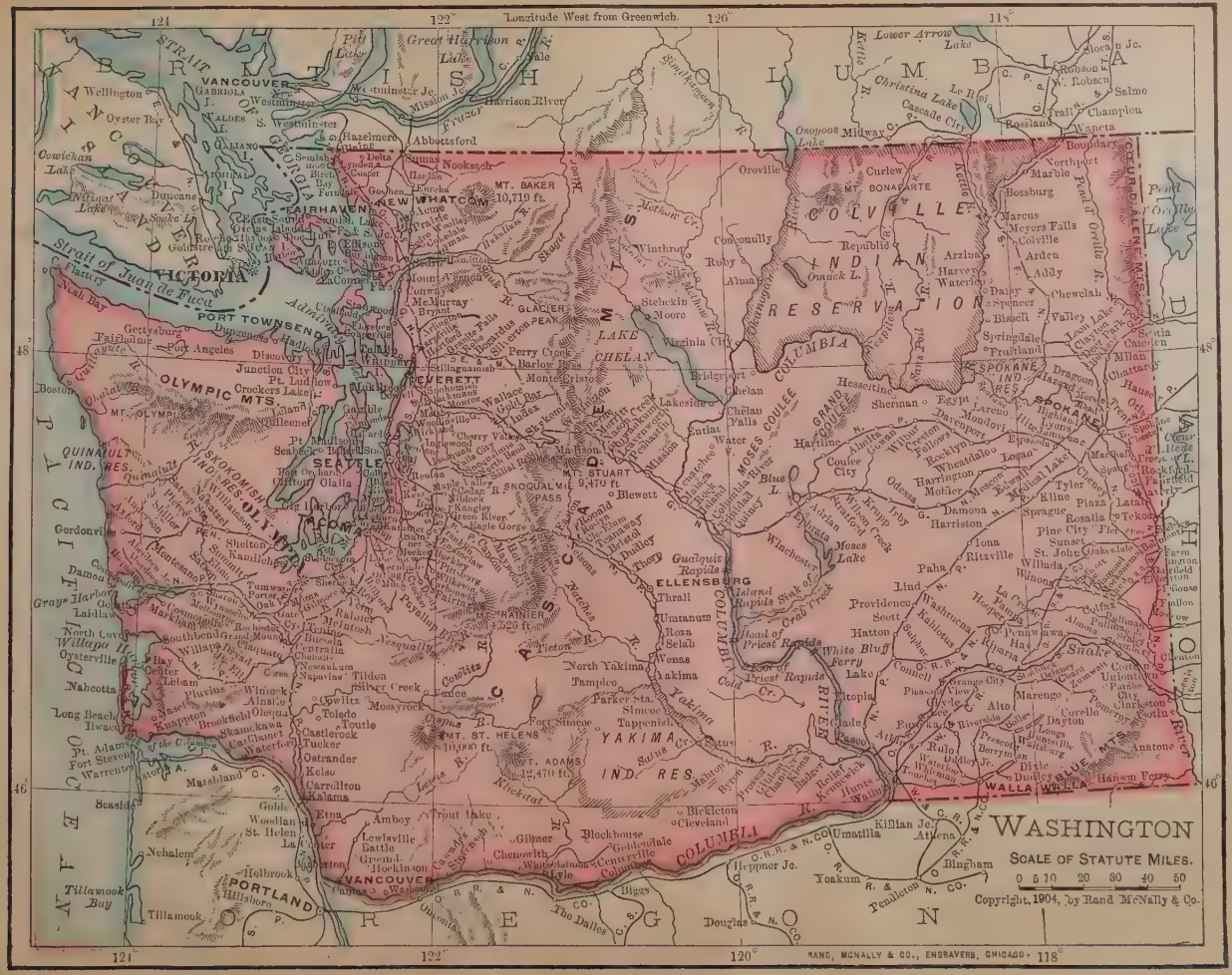
Railways.—Walla Walla & Columbia River Railroad, incorporated 1868, completed 1875. Miles of road in operation, 1875, 110; 1880, 289; 1885, 776; 1890, 1,998; July, 1900, 2,890.57. Value of telegraph, telephone, and electric lines, 1894, $600,891.

Education.—Public school expenditure, 1899-00, $1,795,795; enrollment, 108,660; private, 4,548; school age, 5-21; compulsory, 8-15. Public high schools, 1900, 47. Other educational institutions—State University, Seattle; Normal Schools, Ellensburg and Cheney; Agricultural College, Pullman.

Political.—State elections biennial. State and federal elections Tuesday after first Monday in November. Number of Senators, 34; Representatives, 78; term of Senators, 4 years. Representatives, 2; sessions biennial, in odd-numbered years; Electoral votes, 4. Voters must be citizens or declared intention, residents of State 1 year, county 90 days, town and precinct 30 days. Registration limited; ballot reform. Indians not taxed excluded.

Legal Holidays.—January 1, February 12 and 22, May 30, July 4, first Monday in September, general election day, Thanksgiving, December 25.

Legal.—Statutes of limitation: Judgments, written contracts, 6 years; recovery real property, 5; unwritten contracts, open accounts, personal action, 3; redemption of tax sales, 3. Legal interest rate, 7 per cent; by contract, 12.


Longitude West from Greenwich.
124°
122°
120°
118°
WASHINGTON
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50
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RAND, McNALLY & CO., ENGRAVERS, CHICAGO.
VANCOUVER
VICTORIA
PORT TOWNSEND
FAIRHAVEN
NEW WHATCOM
EVERETT
SEATTLE
TACOMA
OLYMPIA
PORTLAND
MT. BAKER 10,719 ft.
MT. RAINIER 14,526 ft.
MT. ST. HELENS 10,190 ft.
MT. ADAMS 12,470 ft.
MT. STUART 9,470 ft.
OLYMPIC MTS.
CASCADE MTS.
COLVILLE INDIAN RESERVATION
SPOKANE IND. RES.
YAKIMA IND. RES.
QUINAULT IND. RES.
SKOKOMISH IND. RES.
COLUMBIA RIVER
SNOQUALMIE PASS
ELLENSBURG
YAKIMA
WALLA WALLA
SPOKANE
PUGET SOUND
STRAIT OF JUAN DE FUCA
LAKE CHELAN
LAKE COEUR D'ALENE
GRAND COULEE
MOSES COULEE
BLUE MTS.
O. R. & N. CO.
N. P. R. R.
C. P. R. R.
G. N. R. R.
U. P. R. R.
Lower Arrow Lake
Christina Lake
Cascade City
Midway
Osoyoos Lake
Oroville
Curlew
Republic
Ruby
Conconully
Okanogan R.
Methow R.
Winthrop
Twisp
Stehekin
Moore
Virginia City
Chelan
Bridgeport
Entiat
Lakeside
Wenatchee
Leavenworth
Monte Cristo
Index
Gold Bar
Wallace
Skykomish
Monroe
Snohomish
Everett
Marysville
Arlington
Stanwood
Camano
Whidbey
Oak Harbor
Coupeville
Port Townsend
Port Angeles
Discovery Bay
Sequim
Dungeness
Neah Bay
Clallam Bay
Pysht
Quillayute
Forks
Hoquiam
Aberdeen
Cosmopolis
Montesano
Elma
Shelton
Olympia
Tumwater
Yelm
Centralia
Chehalis
Winlock
Toledo
Kelso
Longview
Kalama
Castle Rock
Woodland
Ridgefield
Vancouver
Camas
Washougal
Stevenson
Carson
White Salmon
Bingen
Goldendale
Centerville
Klickitat
Lyle
Dallesport
The Dalles
Biggs
Grant
Douglas
Adams
Whitman
Lincoln
Spokane
Hillyard
Fairfield
Rockford
Latah
Tekoa
Pine City
Sunset
Oakesdale
Colfax
Pullman
Palouse
Moscow
Genesee
Uniontown
Potlatch
Harvard
Bovill
Deary
Troy
Kendrick
Juliaetta
Lewiston
Clarkston
Asotin
Anatone
Pomeroy
Dayton
Waitsburg
Prescott
Walla Walla
College Place
Milton
Freewater
Weston
Athena
Umatilla
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Christmas Lake
Valley Falls
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Tygh Valley
Maupin
Shaniko
Grass Valley
Moro
Wapinitia
Simtustus

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ALASKA. A-lac'-ka.

Corruption of aboriginal "*al-ak-shak*," "great land" or "main land."

Historical.—First visited by Russians under Bering 1741; first occupants, Siberian fur hunters; Alaskan shore explored by Cook 1778; first permanent Russian settlement on Kadiak Island 1784; settlement established on present site of Sitka 1799; destroyed 1802; re-established 1804. Charter granted Russian-American Fur Company 1799; twice renewed; expired 1864. Alaska purchased by United States in May, 1867, for $7,200,000; constituted a military district until 1884, when a District Government was provided.

Area of the Territory, 590,884 square miles; extreme length, 1,100 miles; breadth, 800. Islands number about 1,500; aggregate area, 31,205 square miles; most important, Alexander group—embracing Baranof and Prince of Wales islands—Kadiak Island, and the Aleutian and Pribilof groups.

Physical Features.—Surface naturally divided into three distinct districts: Yukon or Northern, Aleutian or Middle, and Sitkan. Yukon district, between river and Arctic Ocean, characterized by rocky hills and broad marshy plains; Aleutian district includes Alaska Peninsula and Aleutian Islands; interior covered with forests; islands treeless, with remarkable wealth of grasses; Sitkan district largely mountainous and densely timbered. Coast abounds in islands, usually mountainous; Aleutian chain extends into Pacific Ocean nearly 1,500 miles. Coast line affords many excellent harbors; estimated length, 26,364 miles. Yukon, the principal river; largest entering Pacific Ocean; length about 2,000 miles; nearly three-fourths of it continuously navigable for river steamers; second largest river in Territory, Kuskokwim; estimated length, 600 miles. Coast Range of mountains extends into Southern Alaska, and includes Mount St. Elias, 18,024 feet, and Mount Wrangell, 17,500; farther inland is Mount McKinley, with an elevation of 20,464 feet. Pacific Coast famous for its glaciers; Muir and Guyot the most notable.

Forests.—Timber area large. One-fourth the interior below an altitude of 1,000 feet heavily wooded. Forests in Southeastern Alaska dense, as far west as Yakutat Bay; from interior of Kenai Peninsula timber line of mainland follows coast line, at distances varying from 100 to 150 miles, to mouth of Yukon. Forests mainly coniferous; Sitka spruce predominant tree, grows to large size; yellow cedar rare but valuable; hemlock, balsam fir, and scrub pine found in scattered bodies; white birch occurs occasionally in spruce area; alder and willow in all lowlands; poplar in nearly all timbered sections south of Arctic Circle. Forests practically untouched, owing to Government prohibiting exportation of timber.

Climate.—Climates of coast and interior differ widely. That of Southeastern Alaska—and in a measure entire coast climate—greatly modified by Japanese Current; enormous rainfall of this section due to same cause; average number of clear days during year, 66. Approaching interior of mainland winters cold excessive, summers longer and warmer; rain and snow less frequent; skies less cloudy. At Sitka, coldest month, January; temperature, 31.4 deg.; warmest, August; temperature, 54.9; annual rainfall, 81 inches. At St. Michaels, near mouth of Yukon, coldest month, February; average temperature, 2.3 deg. below; warmest month, July; mean temperature, 53.6 deg. Mean temperature in Klondike: Spring, 14.22 deg.; autumn, 17.37 deg.; summer, 59.67 deg.; winter, 30.80 deg. below; in 1896, temperature nine days was 50 deg. below. Point Barrow, most northerly point in United States, mean summer temperature, 36.8 deg.; mean winter, 17.05 deg., with occasional periods when temperature is from 40 to 50 degrees below zero.

Agriculture.—Estimated tillable land in Southeastern and Southwestern Alaska, 2,500,000 to 3,200,000 acres; in Yukon district, 460,000 acres. Southeastern and Kadiak region, including Cook's Inlet, most promising district. Cultivated areas practically confined to small patches yielding hardier garden vegetables, potatoes, turnips, onions, etc. Twelve farms, 1900, 159 acres; total wealth, $15,686; value of produce and live stock 1899, $15,807. Grasses among the most valuable plant products; timothy, Alaska redtop, blue grass, orchard grass, wild barley, and rye flourish. Berries abundant, and of fine flavor. Vegetables and hay may be grown in many sections of Yukon district. Live stock, limited to a few cows, pigs, and poultry, found in villages; at some of the larger places are a few horses. Reindeer, furnishing clothing, used in transportation, and as food, most useful domestic animal. Government maintains five herds, aggregate number, 1,100. Central and Arctic Alaska abounding in long, fibrous white moss, natural food of reindeer, capable of sustaining vast numbers.

Fisheries.—Fishing industry of vast importance. Salmon fishery largest and most valuable; represents a capital of $4,250,000; employs 2,000 white laborers, 2,500 Chinese, 1,000 native. Kadiak Island center of industry. Output of canneries, 1896, 927,354 cases; 1895, 965,450 cases and 9,314 barrels. Value of whale fisheries, 1891, $1,218,293; products included whalebone, 186,250 pounds; ivory, 1,000 pounds; oil, 12,228 barrels. Codfish industry at Shumagin Islands and in Bering Sea. Value of catch since beginning of industry, 1865, $12,861,650; number of fish taken, 25,723,300. Valuable herring fisheries at Killisnoo, on Kenesaw Island; catch, 1892, 18,700,000 pounds; oil, 316,000 gallons, value $85,000; guano, 700 tons, $21,000; salted herring, 1,000 barrels. In 1897, 48,000,000 pounds of canned fish packed in Alaska. Halibut abounds in Central, Southern, and Western Alaska; whitefish, losh, and grayling in Yukon; black bass, trout, and pike in almost all rivers.

Minerals.—Mining the chief occupation throughout Alaska. Fine gold exists in nearly all Alaska rivers. Principal deposits of Southeastern Alaska in vicinity of Juneau. Gold first discovered in Yukon district on Stewart and Lewis rivers, 1885; richest deposits—excepting the Klondike, on border of Alaska—those of Forty Mile Creek, discovered in 1886, and Birch Creek, 1893. In Western Alaska most valuable deposits those of Cape Nome region and of Cape York, 120 miles distant, discovered 1898. Gold, 1899, 264,104 ounces, $5,459,500; 1900, 395,271 ounces, $8,171,000; silver, 1900, 73,300 ounces, commercial value $45,446. Value of gold produced in Yukon district—including United States and British territory—season of 1898-99, about $ 0,000,000. Yield of platinum from Yukon district important. Most valuable coal deposits on east shore of Cook Inlet; petroleum fields along coast of Cook Inlet also worked. Coal beds exist at Norton Sound, Cape Lisburne, and Admiralty, Prince of Wales, and Baranof islands. Copper mined on Prince of Wales Island; copper-gold claims on Cape Fox are being exploited; valuable deposits also found in White Horse copper district. Iron is known to exist in many parts of the Territory.

Fur Industry.—Most valuable of the fur-bearing animals, sea otter, seal, beaver, silver and blue fox, mink, and marten. Value of seal skins taken in Alaska, 1867 to 1890, nearly $33,000,000; other furs, $16,000,000; value of all furs shipped from Territory, 1892, $1,550,000. Owing to threatened destruction of seal fisheries, Government taking stringent measures for their preservation. Seal catch of North Pacific for season of 1896, 73,000; season of 1897, 38,700; catch of Bering Sea, 1896, British vessels, 15,600; American, 1,050. Latest returns for St. George and St. Paul islands give 811 blue and 41 white fox taken.

Population.—Total, 1890, 32,052; 1900, 63,592: Male, 45,872; female, 17,720; white, 30,507; Alaskans, 2,536, including 2,449 half-breeds; Chinese, 3,116; others, 433. Native races, Esquimaux, Athabascan, Aleuts, and Thlinket. First two occupy interior and north and west coast; Thlinkets south coast; Aleuts, parts of Alaska Peninsula, Shumagin Islands, and Aleutian Chain.

Cities.—*Nome*, in gold-mining region between Norton Sound and Bering Sea, largest town in Alaska; famous for its rich beach diggings, discovered 1898; population, 12,486. *Skagway*, at head of Lynn Canal, second in size; point of departure for gold-seekers bound for Yukon over Chilkoot and White passes; first college in Alaska established here 1899; population, 3,117. *Juneau*, leading commercial and trading center; progressive town with fine buildings; population 1,864. *Sitka*, on Baranof island, capital; seat of oldest Greek church in United States, and of an industrial school; residence of the Governor; population, 1,396. *Wrangell*, near mouth of Stikine River, important point of departure for traders and miners bound for interior; population, 868. *St. Michaels* on Norton Sound, flourishing trading post for Yukon and Arctic districts; population, 857. *Douglas*, on Douglas Island, near Juneau, location of Treadwell gold mine; population, 825.

Political, Etc.—Government administered by governor appointed by the President; no legislature; district court sits alternately at Sitka and Wrangell; laws of Territory those of Oregon in force in 1884; United States mineral land and town site laws and the law providing for trade and manufactures applicable in Alaska. Land office at Sitka. Regular service provides for receipt and delivery of mail twice each month at Kichan, in Tongas Narrows, Loring, Wrangell, Douglas, Juneau, Killisnoo, and Sitka.

ALASKA.
Statute Miles, 200=1 Inch.
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NORTH PACIFIC OCEAN
BERING SEA
ARCTIC OCEAN
NORTH WEST TERRITORIES
BRITISH COLUMBIA
Longitude West from Greenwich.
Barrow
Point Hope
Cape Lisburne
Cape Wankarem
Cape Serdze
Cape Prince of Wales
East Cape
Cape Chibukak
St. Lawrence I.
St. Michael
Cape Romanzof
Cape Mendenhall
Nunivak I.
St. Matthew I.
Hall I.
St. George I.
St. Paul I.
Walrus I.
Pribilof Is.
Unimak Pass
Unimak I.
Unalaska
Dutch Harbor
Akutan I.
Kodiak
Kadiak I.
Sitkalidak I.
Cape Trinity
Afognak I.
Shuyak I.
Spruce I.
Chernabura I.
Sannak Is.
Unimak Bay
Shishaldin Vol.
Semidi Is.
Shumagin Is.
Nushagak R.
Kuskokwim Bay
Yukon R.
Kotzebue Sd.
Kobuk R.
Noatak R.
Colville R.
Mackenzie R.
Great Bear L.
Great Slave L.
Athabasca L.
Peace R.
Liard R.
Yukon Flats
Yukon Delta
Mt. McKinley 20,464
Mt. Sanford 16,208
Mt. Drum 14,010
Mt. Wrangell 17,500
Mt. Logan 19,539
Mt. St. Elias 18,024
Mt. Greenough
Mt. Kelly
Mt. Bendeleben
Mt. Sushitna
Mt. Fairweather
Davidson Mts.
Ogilvie Mts.
Rocky Mts.
Franklin Mts.
Richardson Mts.
Wrangell Mts.
Alaska Range
Kuskokwim Mts.
Yukon-Tanana Hills
Nowikakat
Fort Yukon
Fort Hamlin
Fort McPherson
Fort Selkirk
Fort Simpson
Fort Liard
Fort Resolution
Fort Smith
Fort Providence
Fort Reliance
Fort Good Hope
Rampart
Tanana
Atwood
Fairbanks
Eagle
Cudahy
Circle
Dawson
Klondike Region
Upper Ramparts
60 Mile Post
Nome
Golovin Bay
Port Clarence
Teller
Candle
Kotzebue
Kiwalik
Koyuk
Shaktolik
Unalakleet
Anvik
Kutlik
Andreafski
Koserefski
Gavimamut
Bethel
Kolmakof
Akiak
Akiachak
Tuluksak
Togiak
Kanakanak
Naknek
Iliamna
Iliamna L.
Clark L.
Lake Minchumina
Lake Nulato
Lake Kuskokwim
Lake Aleknagik
Lake Becharof
Kvichak R.
Alagnak R.
Naknek R.
Ugashik R.
Egegik R.
Ugashik
Egegik
Kulukhaset R.
Hooper Bay
Kwikpak R.
Ikpikpuk R.
Colville R.
Kowak R.
Selawik L.
Hotham Inlet
Kotzebue Sd.
Kobuk
Candle
Deering
Golovin
White Mts.
Tolovana R.
Tanana R.
Kuskokwim R.
Innoko R.
Iditarod R.
Yukon Flats
Porcupine R.
Sheenjek R.
Coleville R.
Anderson R.
Hare Skin River
Peel River
Rat River
Bell River
Mackenzie R.
Great Bear L.
Great Slave L.
Athabasca L.
Peace R.
Liard R.
Frances Lake
Dease Lake
Teslin
Lake Bennett
Lake Atlin
Taku Inlet
Juneau
Douglas I.
Chilkoot Inlet
Chilkat Inlet
Lynn Canal
Glacier Bay
Icy Bay
Yakutat Bay
Ocean Cape
Cape Suckling
Kayak I.
Hinchinbrook I.
Montague I.
Prince William Sound
Valdez
Copper R.
Cordova
Orca
Latouche I.
Seward
Resurrection Bay
Kenai
Kenai Mts.
Kenai Peninsula
Cook Inlet
Kamishak Bay
Seldovia
Kachemak Bay
Augustine I.
Port Dick
Port Graham
Port Chatham
Shelikof Str.
Kaguyak
Karluk
Orlova
Ugak
Ugak Bay
Alitak Bay
Kiliuda Bay
Kiliuda
Aiaktalik I.
Sitkinak I.
Sitkinak Str.
Trinity Is.
Amak I.
Amak
Isanotski Str.
Isanotski Is.
Shumagin Is.
Nagai I.
Unga I.
Popof I.
Belkofski
Sanak I.
Sanak
Unimak I.
Unimak Pass
Akutan I.
Akutan
Dutch Harbor
Unalaska
Unalaska I.
Makushin
Makushin Bay
Iliuliuk
Captains Bay
Umnak I.
Umnak

PORTO RICO. Por'-to Re'-ko.

Spanish—signifies "rich harbor."

Historical.—Discovered by Columbus 1493, and named by him Porto Rico; invaded and conquered by Spaniards under Ponce de Leon 1509-11; natives revolted under Spanish oppression and were practically exterminated within a century; negroes imported as slaves. Three years' war for independence ended in defeat 1823. Island granted representation in Spanish Cortes 1870; slavery abolished 1873; Porto Rico given autonomous government with executive vested in Governor-General 1897. At close of Spanish-American War, 1898, island formally ceded to United States.

Area, including dependencies—Islands of Vieques, Culebra, Mona, etc., about 3,606 square miles. Porto Rico fourth in size of Greater Antilles. Length, 95 miles; breadth, 35. Distance from both New York and Cadiz 1,500 miles. Number of departments 7. Island of Vieques, about 18 miles northeast of Porto Rico, 21 miles long and 6 miles wide; Culebra 7 miles long; Mona, west of main island, in Mona passage, 7 miles long and 2 wide.

Physical Features.—Surface broken by mountain ranges, extending in general from northeast to southwest; altitudes range from 1,500 to 3,600 feet; highest elevation, El Yunque, 3,670 feet. Tops of mountains all cultivable. Island well watered by numerous rapid-flowing streams; longest rivers in north; estimated number of long rivers, 51; small streams, creeks, etc., 1,200. Coasts generally regular but with many inlets and lagoons; few good harbors; coast line less than 350 miles. Medicinal and hot springs found throughout the island; most important, the one at Coamo.

Climate.—Porto Rico most healthful region of Western Hemisphere lying within the torrid zone. Temperature rarely reaches 90 deg.; never falls below 50 deg.; during heat of summer never above 95 deg. on seacoast. Mean temperature San Juan, 80.7 deg.; during January and February, 76.5 deg.; July and August, 83.2 degrees. Rainfall copious; heaviest north of mountains; fields frequently inundated by excessive downpour; south of mountains, country subject to droughts. Mean annual rainfall, 64.5 inches. Yellow fever unknown in interior towns of higher altitude; occurs occasionally in coast towns; never epidemic.

Forests.—Hills covered with tropical forests, including limited areas of rare, fine woods; mahogany, ebony, cedar, logwood, lignumvitae, and walnut occur; trees and plants furnishing many valuable dyewoods, gums, and resins abound; annotto, used in United States to color butter and cheese, grows wild everywhere; medicinal plants in great variety, and a wide range of tropical fruits found in profusion throughout the island.

Agriculture.—Soil extremely fertile and intensely cultivated. Plantations chiefly on coast plains and in valleys of rivers; irrigation necessary to successful cultivation of large part of land in southern districts, unsystematically carried on. Culture of coffee now the leading industry; plant introduced from Martinique 1722; area devoted to pursuit, 122,000 acres, chiefly in Ponce, Mayaguez, and Arecibo; grown largely on wild and waste hillsides; total yield, 1897, 51,710,997 pounds, value $12,222,599. Sugar, introduced from Canaries through Santo Domingo, also a staple production; area under sugar-cane, 61,000 acres; principal districts, Ponce, Juan Diaz, Island of Vieques, Arecibo, and San German; yield 1899 about 132,000,000 pounds; during late years cultivation greatly diminished through excessive land tax, increasing use of beet sugar, etc. Soil, climate, and labor all favorable to large production. Tobacco, 1897, 6,255,953 pounds, owing to careless methods of culture and curing, product inferior in quality to that of Cuba; under favorable circumstances, industry capable of enormous development; other products are rice, Indian corn, cacao, vegetables, and fruits. Principal food plants of natives, plantain, banana, and sweet potato. All tropical and semi-tropical fruits reach perfection. Oranges, cocoanuts, and pineapples are exported; limes, citron, and shaddock (grape fruit) abundant; guava grows luxuriantly both in lowlands and in mountainous districts; pomegranates, figs, date palms, and tamarinds grow readily. Over 39,000 farms; 747 square miles under cultivation.

Live Stock.—Extensive district in northeast especially adapted for raising cattle; pastures, covered with luxuriant grasses and abounding in running water, superior to any others in West Indies. Estimated area of pasture lands, 1,000,000 acres. Nearly 400,000 head of cattle in 1897. Principal draft animal of island a superior breed of oxen; animals especially adapted to conditions of the country. Native horses, small but of good quality, raised. Island of Vieques large producer of beef cattle.

Manufactures.—Industrial enterprises limited in character and number. Sugar-making, coffee mills for preparing coffee for shipment, chocolate manufactories, and the manufacture of leather, straw hats, baskets, rush pack-saddles, cigars, cigarettes, and coarse grade of plug tobacco the most important. Bay rum and brick and roof tile manufactured on small scale. Tortoise shell also cut and polished.

Commerce.—Value of exports, 1896, $18,341,430, of which $2,248,045 went to the United States; exports 1900-01, $8,634,000, of which $5,661,000 went to United States. Value of imports, 1896, $18,282,690, of which $2,102,094 came from United States; imports 1900-01, $9,367,000, of which $7,415,000 came from United States. Thus while trade as a whole diminished in 1896-1901, that with United States greatly increased.

Minerals.—Mineral resources but little known. Valuable salt deposits worked at Guanica, Salinas, and Cabo Rojo. Sulphides of copper and magnetic oxides of iron found in large quantities. Gold found in many of the mountain streams; worked by natives by most primitive processes. Marble, carbonates, lignites, and amber also occur; the two latter chiefly at Utuado and Moca. Clays of superior quality are plentiful.

Population.—Porto Rico most populous island of West Indies. Population, census of 1899, 953,243; over 98 per cent native born; of foreigners in the island more than half natives of Spain. Colored population about 38 per cent of total, or 363,817 persons—59,390 negroes, 304,352 of mixed blood, 75 Chinese.

Cities.—Population of island mainly rural, only about 21 per cent of inhabitants, or 203,792 persons, dwell in cities and towns; less than 9 per cent in cities exceeding 8,000 inhabitants, a much smaller proportion than in Cuba and the United States. *San Juan*, on a narrow island off the northern coast, the capital and leading city; has the best harbor on the island. Situated on sloping hillside, introduction of underground drainage comparatively easy problem. Former residence of Spanish Captain-General; the "Palace" now the official residence of the civil governor; has finest public buildings, leading schools, most prosperous churches, and largest barracks for soldiers. Its great military hospital, under efficient management of Americans, now a model institution. Population, 32,048. *Ponce*, on southern coast, most progressive and one of most healthful places on the island. Playa, the seaport, two miles distant, seat of custom house and all consular offices. City ranks second commercially, but bids fair to become chief trading center of the island; has hospitals, average schools, a theater, cathedral, and only Protestant church in Porto Rico. Seat of official chamber of commerce. Population, 27,952. *Mayaguez*, on western coast, the most healthful of all the cities. Commercially third in importance; industrially the leading center. Has coffee mills, chocolate manufactories, and a number of minor industries. Population, 15,187. *Caguas* and *Cayey*, on the great military road, in heart of tobacco district, the largest tobacco towns. *Arecibo*, large coffee town on north coast. Population, 8,008. *Aguadilla*, north of Mayaguez, also exports coffee. *Yauco*, a coffee town on south coast. *Guayama*, and *Humacoa*, important sugar towns in southeastern section. *Fajardo*, on east coast, has good harbor.

Railways in operation, 137 miles; under construction, about 170 miles. Military road begun by Spanish Government, 1880, 80 miles, San Juan to Ponce. United States has built over 100 miles of road. There are 470 miles of telegraph lines; submarine cable to St. Thomas and Jamaica. Recent harbor improvements made at San Juan.

Education has been extremely backward; statistics show large proportion of inhabitants to be illiterates. By the census of 1899 there were 659,294 persons 10 years of age and over, of whom 509,498, or over 77 per cent, were unable to read. Under administration of United States, schools have been opened throughout the island; over 800 in 1901.

Religion.—Roman Catholic the prevailing religion. Island contains 71 cathedrals; appropriation for the Church, 1897-98, about $92,000, nearly 5 per cent of entire revenue of island.

Government.—Military rule discontinued and civil government established May 1, 1900. Government, in a general way, modeled on that of Territories; executive vested in Governor appointed by President, Island represented in United States by Resident Commissioner elected by qualified voters of Porto Rico.

Longitude West from Greenwich.
67°
66° 30′
66°
65° 30′
ATLANTIC OCEAN
CARIBBEAN SEA
Railroads
Main Roads
Cart Roads
PORTO RICO.
SCALE OF STATUTE MILES.
0 5 10 20 30
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AGUADILLA
AGUADA
ARECIBO
BAYAMON
MAYAGUEZ
PONCE
GUAYAMA
HUMACAO
SAN JUAN
VIEQUES
Punta Aguila
Punta Borinquen
Punta Salinas
Punta Puerca
Punta Higuero
Punta Jacinto
Punta Figuras
Punta de la Tuna
Cabo de Malapascua
Punta S. O.
Punta Ocidental
Punta Oriental
Punta Arenas
Punta Boca
Punta Caracoles
Punta Mala
Punta Cabras
Punta Cangrejos
Punta Maldonado
Punta Tuna
Punta Yeguas
Punta Guayanilla
Punta Ballena
Punta Cabullones
Punta Cabullones
Punta Cabullones

PHILIPPINES. Fil' ip ins. "Pearl of the Orient."

Named in honor of Philip II of Spain.

Historical.—Islands discovered by Magalhaes (Magellan) 1521; first settlements by Spaniards made on Island of Cebu 1565. Spain took formal possession of islands 1569; Manila erected into colonial capital 1571. Conquest of islands attempted by Chinese 1574; various contests with Dutch 1606-42; Manila captured by English 1762; restored 1764. Numerous native rebellions have occurred; most important those of 1822, 1841, 1872, and 1896. War declared between United States and Spain April, 1898; Spanish fleet in Manila Bay destroyed and arsenal captured by Americans in May; city of Manila surrendered August; Philippines formally ceded to United States December. Native insurgents protested against American occupation and warfare continued.

Area.—Number of islands in group about 2,000—many mere rocks and uninhabited islets; cultivable or valuable for mineral or other resources, between 400 and 500. Area, including Sulu Islands, estimated at 114,300 to 115,300 square miles.

Physical Features.—Entire archipelago probably of volcanic origin. Interior of all islands mountainous; many volcanoes exist, several in almost constant activity; Apo (10,280 feet), on Mindanao, and Halcon, Mindoro, highest elevations in Philippines. Between the numerous mountain chains are luxuriant plains and wide, fertile valleys. Rivers and lakes numerous, especially in larger islands. Coast line irregular, the numerous creeks and bays forming many natural harbors; eastern coast steep and rugged. Hot springs of iron and sulphur occur.

Climate continual summer. Hottest season from March to May; most of the islands receive rain during southwest monsoon; rainy season, beginning middle of April, lasts six months; dry season other half of year. On all coasts facing Pacific Ocean seasons reverse of above; hottest months June, July, and August. Temperature ranges from 60 deg. to 90 deg., mean average 81 deg. Annual rainfall, Manila, 99 inches; along eastern coast rainfall almost incessant. Greater part of archipelago periodically disturbed by terrific hurricanes. Earthquakes frequent. Islands in general healthful, excepting in all marshy districts, where malaria exists; rate of mortality low. Yellow fever unknown.

Forests very extensive; as yet practically untouched. Mountain ranges in general thickly clothed with trees and light undergrowth. Many varieties of rare hardwoods, suitable for interior wood-working, manufacture of furniture, shipbuilding, etc., abound; other trees afford dyewoods, gums, resins, and flowers used in manufacture of perfumery. Numerous palms—including cocoanut—and bamboos grow in profusion. Tropical fruits abundant. Pineapples grown chiefly for fiber from which the beautiful piña cloth is woven. Among numerous bananas is included the *Musa textilis*, which furnishes the well-known Manila hemp (abacá) of commerce. Medicinal herbs and roots abound everywhere.

Agriculture.—Agricultural resources of country unsurpassed. Large proportion of cultivable area entirely undeveloped. Soil of extraordinary richness and fertility. All economic plants of tropics successfully grown. Chief industries of islands production of hemp, sugar, copra, and tobacco. Leading product hemp, a fiber obtained from species of banana or plantain; plant found wild on all mountain slopes; cultivated most extensively in islands of Leyte and Province of Albay, Luzon; product averages over 100,000 tons annually. Sugar industry second in importance. Sugar cane grown in all parts of archipelago; chief centers of production Luzon and Negros; yearly export of raw sugar over 200,000 tons. Cocoanut plantations profitable. Production of copra—dried kernel of cocoanut—constantly increasing. Culture of tobacco prominent. Plant introduced from Mexico in sixteenth century; finest quality of tobacco grown in northern provinces of Luzon; leaf from east coast of Negros ranks second. Coffee industry, owing to ravages of insects, declined in value damp districts. Rice generally the staple food of the natives; Indian corn in limited districts in the south; sweet potato, or yam, also a favorite article of food. Tropical fruits not cultivated; found in abundance on all the islands.

Live Stock.—Cattle, sheep, and goats introduced from Spain; number in islands not large. Domestic pigs and chickens numerous throughout the farming districts. Carabao, or water buffalo, the principal beast of burden; oxen also used as draft animals. Philippine ponies found in large numbers; small in size, but possessed of great strength and endurance.

Manufactures.—Cigars the staple article of manufacture. Piña muslin of pure pineapple-leaf fiber, with rough cloth from selected hemp fiber, and some special cotton and woolen fabrics constitute the textiles. Straw hats and mats and cordage manufactured. Rough pottery, whitewood furniture, wood carving, bamboo furniture, handsome embroideries, and work in silver and gold are among local industries. Preparation of copra for shipment ranks among the newer industries; is one of the most promising pursuits in the islands. Future of hemp industry of great importance.

Commerce.—Value of imports, 1900, $20,601,436; exports, $19,751,068. Principal imports: Flour, rice, wines, clothing, petroleum, coal, arms, machinery, and iron. Principal exports, 1897: Hemp, $18,040,760; sugar, $12,928,000; copra, $4,462,920; tobacco leaf, $2,786,200; cigars, $1,694,600; indigo, $107,000; coffee, $96,000; rope, $63,400. Imports from United States, 1896, $162,446; 1900, $3,519,673; exports to United States, 1896, $4,982,857; 1900, $6,095,849. Amount of hemp exported—chiefly to United States—1900, 688,392 bales; sugar, chiefly to China and Japan, 996,827 piculs; tobacco, chiefly to Europe, 18,837 tons.

Minerals.—Gold widely distributed; found in nearly all water courses. No systematic mining has been undertaken. Galena of good quality found in Luzon and Cebu; most important deposits on Island of Marinduque. Iron containing from 75 to 80 per cent pure metal abundant in Luzon, Cebu, Panay, and other localities. Finest deposits, Bulacan Province, Luzon. Copper occurs in nearly all the islands. Sulphur abounds in neighborhood of active and extinct volcanoes. Coal exists in many localities; extensive deposits in Cebu and Batan; petroleum and lead also found in Cebu; lead mines partially developed. Marble of fine quality exists; quarried in limited quantities. Pearl fisheries of Sulu Islands a source of wealth.

Population, estimate 1900, 6,961,339. Inhabitants are Europeans (25,000), Chinese (100,000), mixed races, and natives. Native population chiefly Malayan; some aboriginal tribes of Negritos.

Cities.—*Manila*, capital of islands, founded 1571 by Spaniards; situated on western coast of Luzon, at junction of Pasig River and Bay of Manila. Distance from Hongkong, 628 miles; two and a half days by steamer. Old city comparatively small; surrounded by wall; contains cathedral of 17th century, other churches, the archbishop's palace, monasteries, convents, the governor's palace, and numerous government buildings. Great commercial center, Binondo, on north bank of Pasig. Retail trade almost entirely in hands of Chinese; import and export trade chiefly in the hands of foreigners. City contains a university, school of art, an observatory, and many educational and charitable institutions. Has telephone and electric-light systems. Population, including suburbs, about 300,000. *Iloilo*, second port of Philippines, situated on southeastern coast of Island of Panay. Has well-sheltered harbor with excellent anchorage. City has number of foreign residents engaged in trade, and is the seat of several vice-consulates. Principal thoroughfares well laid out and town contains many good buildings. Inadequacy of communication with interior towns retards development of port. Shipping center for Panay and Negros islands. Sugar, hemp, and sapan-wood exported. Population, 11,900. *Cebu*, on eastern coast of Cebu Island, third port. City a place of great historical interest. Capital of Colony from 1565 to 1571. Contains a fortress built at time of first Spanish settlement. Is a cathedral city and a bishop's see. Former residence of Brigadier-Governor of Visayas and of Cebu Island. Hemp and sugar exported; fine piña stuffs also sold here. Population about 12,000.

Railways.—Line from Manila to Dagupan, 123 miles. Telegraph 720 miles; 1894, total telegraph and cable from Manila to Hongkong and southern islands, 1,592 miles. Mail service between Manila and Hongkong, and Manila and principal ports of southern islands.

Education formerly in charge of priests and connected with churches. One thousand American teachers provided for in 1900. About 160,000 public school pupils.

Religion.—Exercise of any religion other than Roman Catholic was forbidden.

Government, Etc.—Islands were divided among three governments: Luzon, the Visayas, and Mindanao with the Sulu Archipelago. In 1901 under joint military and civil control of United States. Silver basis of currency in islands; Mexican dollar practically the only money in circulation; no gold in general circulation for twenty years.

Longitude East from Greenwich.
A 110° B 115° C 120° D 125° E
CHINA SEA
PACIFIC OCEAN
GULF OF TONG-KING
HAINAN
KIUNG-CHOW
Hanoi
Lien-chow
Mon-kay
Hai-phong
Kwang Chou Bay (French)
Hainan Strait
Macao (Port.)
Hongkong (British)
Than-hoa
Vigne
Ha-tinh
Yai
Leong-soi
Dong-hui
Cape Lay
Thuan-an
HUE
Turan
Kwang-ngai
ANNAM
CHINA
Cape San-hoe
Phuyen
Honkoe Bay
Camranh Harbor
COCHIN CHINA
SAIGON
Binh-Tuan
Baria
Bau-trang
PULO CONDORE
PHILIPPINE ISLANDS AND THE CHINA SEA.
SCALE OF STATUTE MILES.
0 25 50 100 150 200 250
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FORMOSA
South Cape
Bashee Channel
BASHEE IS.
BATANES IS.
Balintang Ch.
BABUYAN
BABUYANES IS.
CALAYAN I.
DALUPIRI I.
FUGA
O. Bojador
CAMIGUIN I.
Mast Arriba
Pt. Engano
LUZON
CAGUA VOL.
Lingayen Gulf
Bolinao
Pt. Tumango
C. S. Ildefonso
Lingayen
Baler
Bongabong
Pingatan Bay
Iba
POLILLO I.
Baco
Subic
Balanga
Mariveles
Manila B.
Corregidor I.
MANILA
Manila Bay
Jomalig B.
Mayoyao
Magnaga Channel
CATANDUANES I.
Lubang
C. Calavite
Batangas
Calapan
Mindoro Strait
MINDORO
Busuanga I.
CALAMIANES IS.
Culion I.
Linacapan
Cabuli Pt.
Malampaya Bay
Tayitay
Cuyos Is.
Dumaran I.
Cleopatras Needle
Palawan Passage
PALAWAN I.
Bahia Honda
Cagayanes Is.
VICTORIA PK.
MT. MANTALINGAJAN
Puerto Princesa
Bulilluyan Pt.
Balabac I.
Balabac Strait
Sampanmangio Point
Labuan I.
Brunei
NORTH BORNEO (BR.)
Darvel B.
Sibuto I.
Lubuk Bay
Cape Unsang
Sibuco B.
Mindoro Strait
Tablas I.
Mangarin
Sibuyan I.
Pt. Nasog
Pandan
Romblon I.
Simara I.
Magdalena
Batan
Biliran I.
Cabalagnan
SAMAR I.
Borongan
Taclobano
Guiuan
PANAY
Str.
Iloilo
Bacolod
LEYTE I.
Malhou I.
Cuyos Is.
Guimaras I.
Cebu
Iloilos
Talisay
Dinagat I.
St. Olgao
Nasu Pt.
Calavite
Canayan
Bohol I.
Surigao Is.
Bucas I.
Cartagena
Dumaguete
Siquijor
Camiguin I.
Gault Point
Tolon
Bacon Vol.
Butuhan
Tagulo Pt.
Daptan
Cagayan
Misamis
Bislig
SULU OR MINDORA SEA
Pt. Gorda
Sta. Maria
MINDANAO
Iligan B.
Iligan
Cotabato
Caraga
Zamboanga
Basilan Str.
Basilan
Is Isabela
Pt. Flecha
Dumanquilas B.
Dumanquilas I.
Pt. Dumanquilas
Apo Vol.
Davao B.
Davao
Pujaga Bay
Pangutaran Basilan I.
Sulu
Tawi Tawi
Sulu Archipelago
Balut I.
Pt. Pulo
Sarangani B.
Sarangani Is.
CELEBES SEA
E., MC N. & CO., ENGR'S CHI.
687

HAWAII. Ha-wi'e.

Historical.—Islands visited by Spaniards 1542; re-discovered by Cook 1778, and named Sandwich Islands in honor of the then first lord of the admiralty; during second visit, 1779, Cook murdered by the natives. Trade with natives established by fur traders from America en route to China 1786. Islands united into a kingdom under Kamehameha I, 1791. Idolatry abolished 1819; American missionaries settled in islands 1820. First treaty with United States 1826; first constitution proclaimed 1840; more liberal one 1887; Reciprocity treaty, practically establishing free trade with United States, ratified 1875. Reigning queen deposed and provisional government formed 1893; Republic proclaimed July 4, 1894; formally annexed to United States July 7, 1898. Territory of Hawaii created 1900.

Area, 6,449 square miles. Group practically comprises eight larger islands—the four smaller ones being mere rocks: Hawaii, 4,015 square miles; Maui, 728 square miles; Oahu, 600 square miles; Kauai, 544 square miles; Molokai, 261 square miles; Lanai, 135 square miles; Niihau, 97 square miles, and Kahoolawe, 69 square miles.

Physical Features.—Chain extends from northeast to southwest; islands mountainous and of volcanic formation—partly surrounded by reefs. Surface broken and diversified by many valleys and streams; Hawaii and Kauai, especially, well supplied with rivers. Most prominent physical features of group, volcanoes of Mauna Kea, 13,805 feet—quiescent—and Mauna Loa, 13,675 feet—still active—on island of Hawaii; Kilauea, on same island, 16 miles south, largest active volcano in the world; circumference of its oval-shaped crater 9 miles; depth, 1,000 feet. Mountains on other islands range from 4,000 to 5,000 feet; extinct craters abound clothed with luxuriant vegetation.

Climate of all healthful and equable; within the tropics but lying in mid-ocean with prevailing winds northeast trades, perpetual summer without enervating heat; extreme heat and cases of sunstroke unknown. Temperature varies according to elevation and position; mean average, 71.5 deg.; highest, 89 deg.; lowest, 54 deg. Rainfall abundant; annual average on windward side, 176.82 inches; on leeward side 51.21 inches. Islands lie outside cyclone belt; severe storms accompanied by thunder and lightning rare.

Forests.—Higher elevations of mountains covered with dense forests, especially windward slopes. Excellent ship timber and many ornamental woods abound. Much fuel cut. Attention now being paid to practical forestry in the islands and the increase of the forests, steps being taken to protect them from ravages of roaming cattle. Forest products, 1899, $125,094, reported by 172 farmers.

Agriculture.—Climate favorable to nearly all products of tropics and temperate zone. Hawaiian sugar plantations most productive in the world. Include 8 per cent of farms, but cover three-fourths of cultivated land, employ 87 per cent of agricultural class, and contribute four-fifths the value of all crops. In 1899, 2,239,376 tons; value, with sugar and molasses made on spot, $18,762,996. Rice, 33,442,400 pounds, $1,562,051; coffee (production rapidly increasing), 2,297,000 pounds, $246,181; taro, the great native food, 169,323 bags, $177,843; bananas, 141,653 bunches, $52,620; pineapples, 116,560, $9,160; oranges, 3,368 boxes, $6,714; all crops, $21,417,516; animal products, $623,215. Total value of farm property (June 1, 1900), $74,084,988; 2,273 farms, 2,609,613 acres—294,545 acres improved. Over 97 per cent farming area in 116 farms of 1,000 acres or over; white farmers occupy 80 per cent of farm area, with 92 per cent of total value. Irrigation largely necessary, except on island of Hawaii; has already transformed the islands. System extensive and built at great expense. Percentage of farm area irrigated, 1900, 28; land value, 63 per cent that of all farms. All rice and small fruits, three-fourths of taro, two-thirds of bananas, over half the pineapples, and about half the sugar are grown by irrigation.

Live Stock.—Cattle and other European domestic animals introduced by Vancouver and succeeding navigators. On Hawaii herds of wild cattle roam the mountain forests. Hunted chiefly for their horns and hides. Animals on farms, 1900: Horses, 12,982, $441,661; mules, 6,506, $590,507; dairy cows, 4,028, $127,820; young cattle, 42,025, $324,576; other cattle, 56,737, $833,130; sheep, 102,098, $133,883; swine, 8,057, $49,576; value all live stock, $2,570,146. Exports of 1899 included 33,848 pounds tallow, 15,282 sheepskins, 357,501 pounds wool, 23,019 goat and deer skins.

Commercial and Naval Importance.—Islands occupy central position in North Pacific Ocean. Situated 2,089 nautical miles southwest of San Francisco, 4,640 northwest of Panama, 3,800 northeast of Auckland, New Zealand, 4,950 east of Hongkong, 3,440 from Yokohama, and 4,350 east of Manila; have steamer connection with American Continent, Australasia, China, and Japan. Commercially, Hawaii a dominant factor in trade between America and Asia, as place of call and depot for ships' supplies; from naval standpoint the great strategic base of Pacific.

Commerce.—Notable increase in trade since adoption of reciprocity policy, 1875. Value of imports, 1876, $1,811,770; exports, $2,241,041; imports, 1899, $19,059,606; exports, $22,628,742. Chief exports, 1899: Sugar, $21,898,191; coffee, $132,348; hides, $95,608; bananas, $84,269; rice, $42,562; wool, $26,679; honey, $9,949. In 1899 United States took 99.51 per cent of all exports. Imports from United States 1899–1900: Breadstuffs, $1,024,604; provisions, $434,385; oils, $242,272; fish, $234,227; animals, $235,622, hay, $165,634; manufactures of iron and steel, $5,064,806, of wood, $1,314,957; of cotton, $572,551; of leather, $307,270; of tobacco, $332,759. In 1900, 665 ships of 867,905 tons entered at Hawaiian ports. The merchant marine, 1899, comprised 62 vessels of 33,468 tons.

Population census of 1832, 130,313; 1853, 73,138; 1872, 56,897; 1890, 89,990; 1900, 154,001: Male, 106,369; female, 47,632: native-born, 63,221; foreign, 90,780; white, 66,890—37,656 Hawaiians or part Hawaiians, 28,819 Caucasians, 415 South Sea Islanders; colored, 87,111—Negro, 233; Chinese, 25,767; Japanese, 37,111. Total increase since 1832, 23,688.

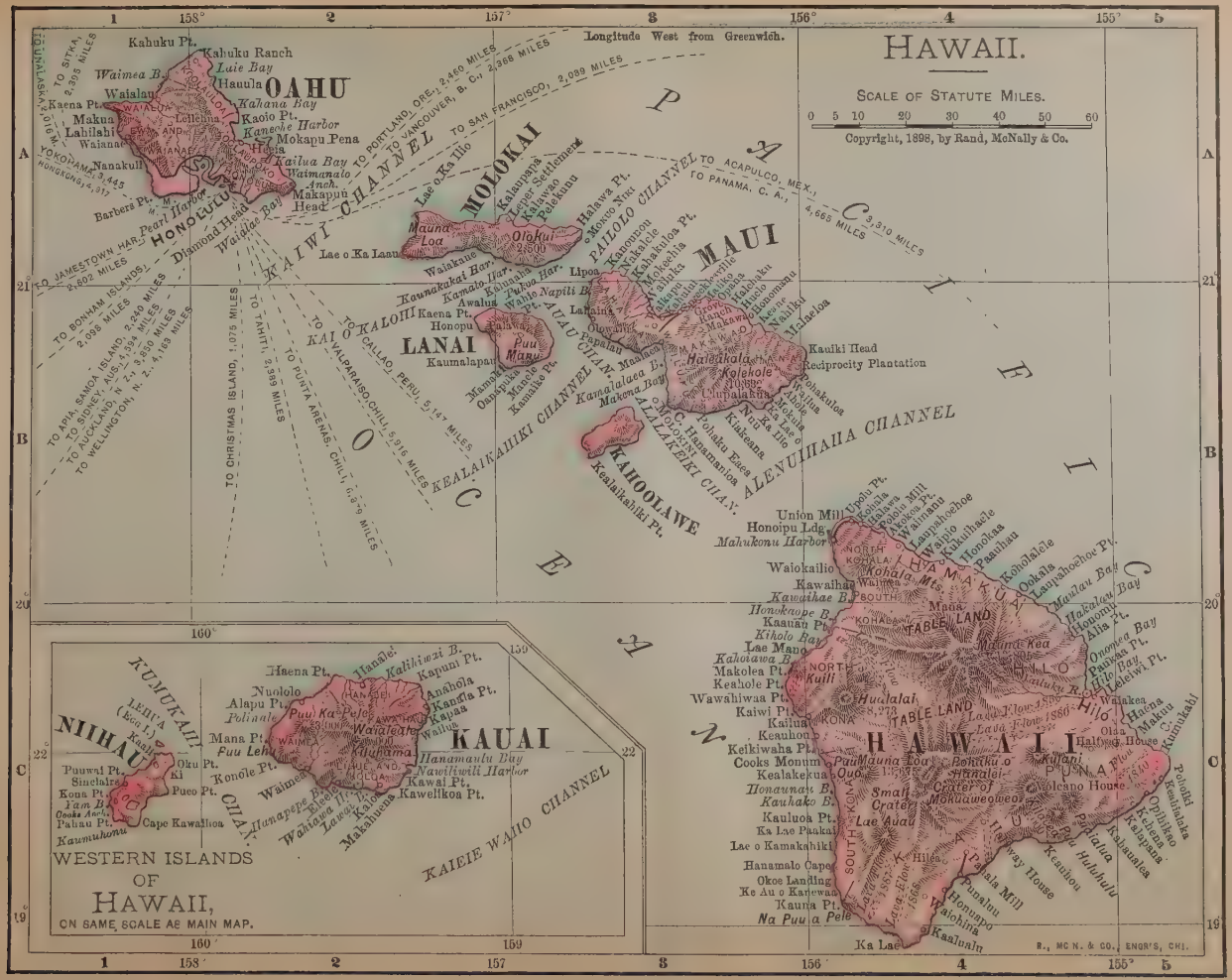
Cities.—*Honolulu*, capital, chief seaport, and center of commerce; situated on south coast of Island of Oahu—best cultivated and most populous and flourishing of group. Fine natural harbor, formed by lagoon with depth of 22 feet; ample room for large number of vessels; wharf 600 feet long; facilities for ship repairs. Public buildings handsome and commodious; many beautiful residences with numerous churches, asylums, and hospitals; public library with 10,000 volumes. Length of streets and drives, 67 miles; 20 miles macadamized. Telephone system extends throughout island. Has six English newspapers besides those in Hawaiian, Portuguese, Japanese, and Chinese languages. Business chiefly carried on by Americans and Europeans. Population, 39,306. *Hilo*, second in importance; seaport on east coast of Hawaii—largest island of the group. Has lighthouse visible 10 miles. Population, 3,500. *Lahaina*, on western coast of Maui; the only safe port on the island; population, 1,000.

Railways, Etc.—There are railway lines in the islands of Oahu, Hawaii, and Maui; aggregate length, 103 miles. Length of telegraphs in islands, 250 miles; Lines established throughout Maui and Hawaii, and extend between Hawaii and Oahu and round Oahu. Wireless telegraphy system established in 1901, to connect all the islands. Telephones connect all points on islands of Oahu, Kauai, and Hawaii; established in part on Maui. Islands belong to Postal Union.

Education.—Hawaiian-language reduced to writing and first book published in Hawaiian, 1822. Native seminary founded, 1831. Excellent system of free public schools (English) established throughout the islands. Primary education compulsory; school age, 6 to 14. In 1899 schools numbered 189, with 544 teachers · 282 American, 130 Hawaiian or part Hawaiian, 66 British. Number of pupils, 15,490: Hawaiians, 5,330, half-castes, 2,721; Portuguese, 3,822; Asiatics, 2,455. Of Hawaiians and part Hawaiians, over 87 per cent can read and write.

Religion.—All forms of religion permitted. In 1896, Protestants numbered 23,773; Roman Catholics, 26,363; Mormons, 4,886; Buddhists, 44,306.

Government, Etc.—Government of the Territory vested in a governor appointed by the President. Legislature, general elections, etc., like those of the other territories. All legislative proceedings conducted in English. All whites, all persons of African descent, and all Hawaiians, citizens of Hawaii immediately prior to its annexation to United States, declared citizens of United States; number of registered electors, 1897, 2,687. Revenue, 1899, $3,345,231; expenditure, $2,553,727; total debt, 1900, $4,937,464. Deposited in postal savings banks, 1897, $953,981. For military purposes Islands have been attached to Department of California. Regiment of 8 companies, numbering 476 officers and men. Since 1884 only gold coins of United States are legal tender for more than $10; only Hawaiian and United States silver coins for smaller amounts.


HAWAII.
SCALE OF STATUTE MILES.
0 5 10 20 30 40 50 60
Copyright, 1898, by Rand, McNally & Co.
Longitude West from Greenwich.
OAHU
Kahuku Pt.
Kahuku Ranch
Luie Bay
Waimea B.
Hauula
Waialua
Kaena Pt.
Kahana Bay
Kaoio Pt.
Makua
Lahilahi
Waianae
Lelehua
Kamehe Harbor
Mokapu Pena
Honia
Kailua Bay
Waimanalo
Anch.
Makapuu Head
Nanakuli
Barbers Pt.
Pearl Harbor
HONOLULU
Diamond Head
Waikiki Bay
MOLOKAI
Lae o Ka Ilio
Kalaupapa
Leper Settlement
Kalawao
Pelekunu
Maunaloa
Olokui 2,500
Lae o Ka Lanu
LANAI
Kaena Pt.
Honopu
Kaumalapau
Puu Maru
Manele
Opunui
Kamiki Pt.
MAUI
Halawa Pt.
Moomomi
Kahakuloa Pt.
Kaupoa
Kahakuloa
Molehelehe
Kahakuloa
Kalialinui
Kahului
Honuaula
Kaupakuea
Kaupo
Kaupo Gap
Kaupo Pali
Kaupo Village
Kahikinui
Makawao
Haleakala
Kolekole
Olinda
Kula
Kihei
Kalepolepo
Kalepolepo Pt.
Kauiki Head
Reciprocity Plantation
Kohukuloa
Wailua
Ahihi
Nuu Hio
Lae o Kukui
Kukuiula
Kukuiula Bay
Kanaio
Kanaio Pt.
Kanahena Pt.
Kanahena

PANAMA.

Historical.—Discovered by Columbus 1502, occupied by Spaniards 1519. Joined revolt of Colombians 1824; remained part of Colombia, except for brief secessions in 1840 and 1857. Finally seceded in 1903. **Area.**—31,570 square miles, divided into seven provinces. Size about that of Maine, and average width like New Jersey. **Physical Features** include mountainous interior, flanked on north by well-drained foothills region; low coastal strips are often swampy. Rivers short and of small volume except in rainy season. Coast line of 1,245 miles has many lagoons and bays. **Climate** is tropical, and humidity is excessive. Rainfall almost constant from April to December. Pacific side slightly cooler and dryer than Caribbean. **Forests** contain bamboo, mahogany, caoutchouc, cedar, dye-woods and trees producing drugs. **Agriculture** backward. Rice, corn, yucca, plantain, sugar cane, cotton, tobacco grown for local use. Outside capital owns large plantations for bananas, cocoanuts, cacao, coffee. **Ranching** is successful in uplands. In 1898 live stock estimated at 165,000 cattle, 35,000 horses, 85,000 hogs, and 12,000 goats. **Manufactures** small in amount. Soap and chocolate in Panama city; ice and mineral waters in Colon; cigars, raw sugar, cotton and woolen goods, iron castings in Santiago; ropes and straw hats in smaller towns. **Minerals** fairly abundant. Gold mined in nearly every province. Silver, copper, iron, manganese exist in workable quantity. Coal, salt, chalk, lime worked at several points. **Commerce** chiefly with United States, next ranks United Kingdom, with Germany, France, Hong-kong following. Chief imports, groceries, cotton goods, clothing, coal, liquors, footgear, hardware. Chief exports, bananas, cocoanuts, coffee, mahogany, cocobolo wood, hides, mother-of-pearl, gold, rubber, sarsaparilla, ipecacuanha. Value imports 1903 about $2,300,000, exports about the same. **Ports** are Panama, Aguadulce, San Miguel, Tahoga, on Pacific side; Colon, Boca de Toro, Porto Bello, Chagres, on Caribbean side. American steamships to New York, New Orleans, Mobile, San Francisco, and British, French, German, Spanish, Chilian lines to foreign ports. **Population** in 1905 estimated at 311,000 largely Indian and Spanish descent. Negroes about one-eighth of whole. Capital city is Panama, population about 20,000. **Communications** include trans-isthmian railway, wagon roads from Panama to Porto Bello, and Panama to Cruces. Trails used elsewhere. Telegraph across isthmus, and from Panama to David. Cables and wireless system to outer world. **Education** is backward, and illiteracy general. In 1898 reported 110 schools and attendance 4,006. **Religion** prevailingly Roman Catholic. All other worship tolerated. **Government** is by President and National Assembly. President elected by popular vote for four years. Assembly has 32 members, elected for four years, and meets biennially.

CANAL ZONE.

Historical.—Used by Spaniards as a gateway to the Spanish Pacific colonies. Interoceanic canal suggested in 1520 and 1550. Project revived by Colombians 1826 and surveys made. Americans build Panama railway 1850–55. French secure canal grant 1878 and begin work. United States secures canal grant 1903, buys French interests 1904. Estimated cost to United States—$10,000,000 paid to Panama, $40,000,000 paid to French company, and $140,000,000 expenditure to finish canal. **Area,** 474 square miles, about one-third that of Rhode Island. Lies in strip 10 miles wide along canal route. **Climate** now as healthful as in any tropical region as result of sanitation under American control. Days enervating from heat, but nights cool and refreshing. Hill region is agreeable residence for foreigners. **Agriculture** is chiefly that of food crop along the line of the new canal. **Minerals** exist in small quantities but are not mined. Porphyry for building is quarried at Bohio. **Commerce** consists almost wholly of imported material for canal work and coal for ocean vessels. In 1904 freight of 415,000 tons was carried across the isthmus for ocean trade. **Ports** are Cristobal, Ancon and Flamenco, where steamships make landings. **Population** variable. In 1906 reported 78,090, including 50,890 canal employes. **Government** vested in Canal Commission, appointed by President of U. S. One member acts as governor of Zone. Canal work controlled by a chief engineer.

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